



# TSMC Annual Report 2016 (I)



## Taiwan Semiconductor Manufacturing Company, Ltd.

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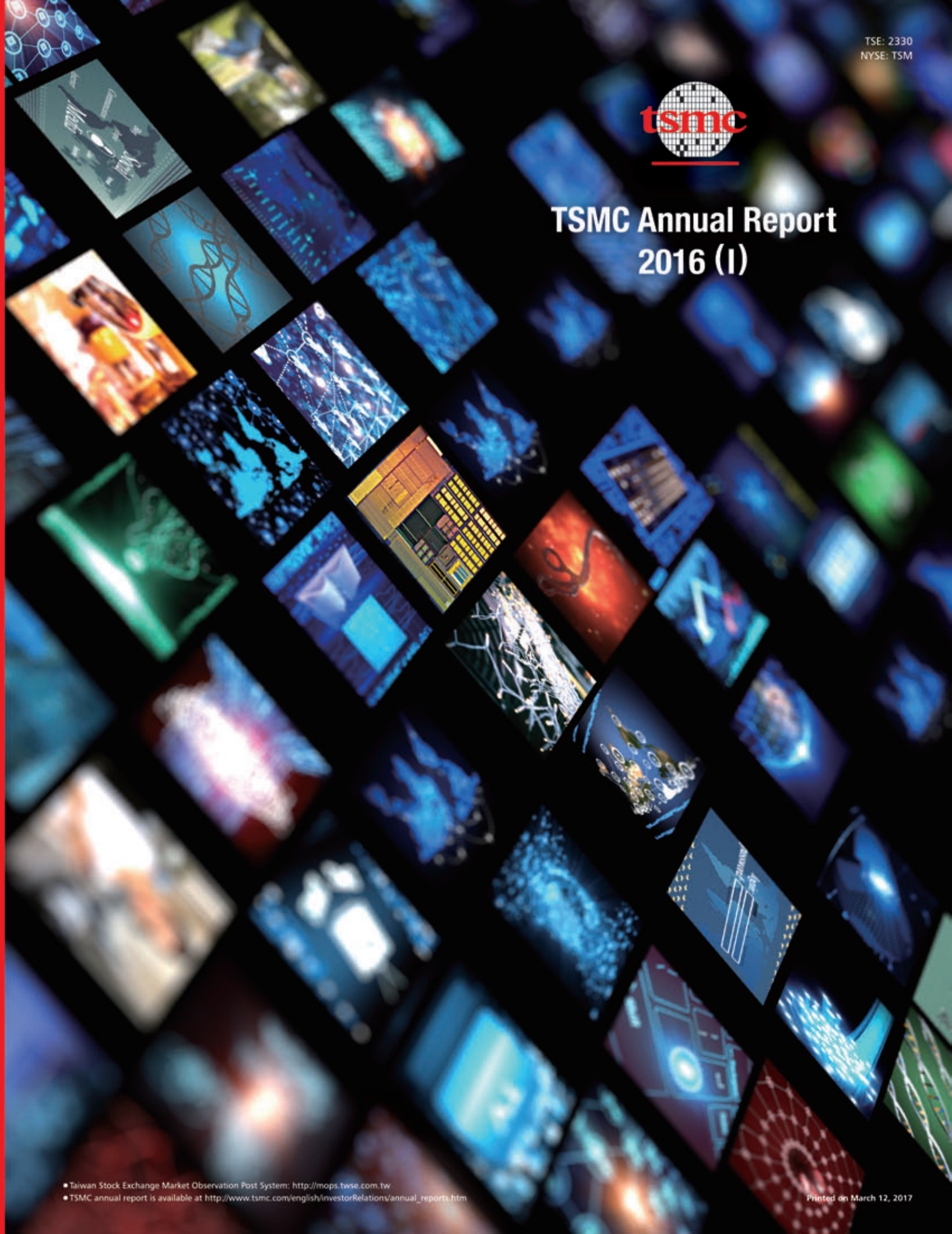
Taiwan Semiconductor Manufacturing Company, Ltd.



Morris Chang, Chairman

Taiwan Semiconductor Manufacturing Company, Ltd.

Annual Report 2016 (I)





# TSMC Vision, Mission & Core Values

## TSMC's Vision

Our vision is to be the most advanced and largest technology and foundry services provider to fabless companies and IDMs, and in partnership with them, to forge a powerful competitive force in the semiconductor industry.

To realize our vision, we must have a trinity of strengths:

- 1. be a technology leader, competitive with the leading IDMs
- 2. be the manufacturing leader
- 3. be the most reputable, service-oriented and maximum-total-benefits silicon foundry

## TSMC's Mission

Our mission is to be the trusted technology and capacity provider of the global logic IC industry for years to come.

## TSMC's Core Values

### Integrity

Integrity is our most basic and most important core value. We tell the truth. We believe the record of our accomplishments is the best proof of our merit. Hence, we do not brag. We do not make commitments lightly. Once we make a commitment, we devote ourselves completely to meeting that commitment.

We compete to our fullest within the law, but we do not slander our competitors and we respect the intellectual property rights of others. With vendors, we maintain an objective, consistent, and impartial attitude. We do not tolerate any form of corrupt behavior or politicking. When selecting new employees, we place emphasis on the candidates' qualifications and character, not connections or access.

### Commitment

TSMC is committed to the welfare of customers, suppliers, employees, shareholders, and society. These stakeholders all contribute to TSMC's success, and TSMC is dedicated to serving their best interests. In return, TSMC hopes all these stakeholders will make a mutual commitment to the Company.

### Innovation

Innovation is the wellspring of TSMC's growth, and is a part of all aspects of our business, from strategic planning, marketing and management, to technology and manufacturing. At TSMC, innovation means more than new ideas, it means putting ideas into practice.

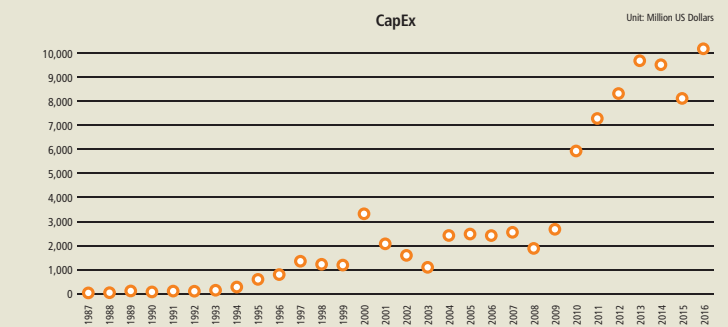
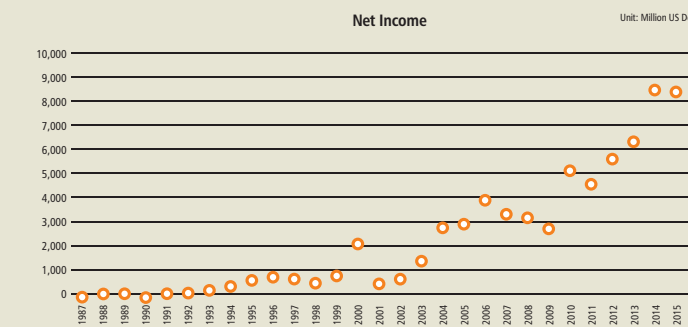
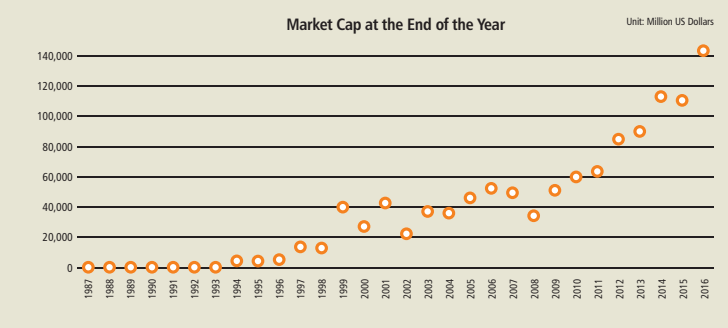
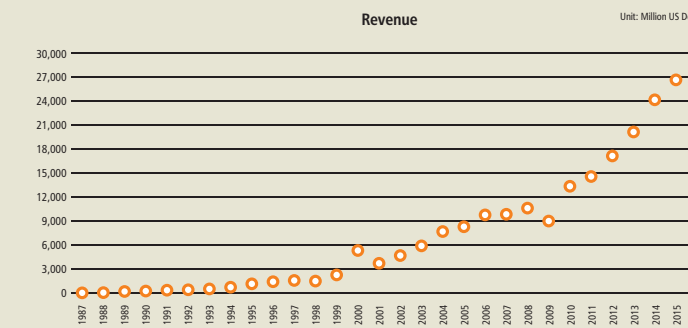
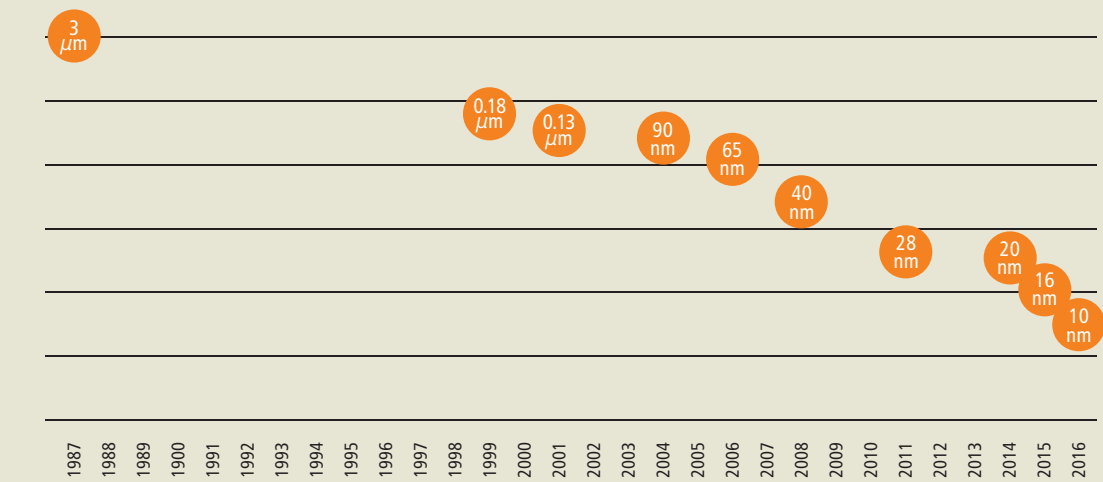
### Customer Trust

At TSMC, customers come first. Their success is our success, and we value their ability to compete as we value our own. We strive to build deep and enduring relationships with our customers, who trust and rely on us to be part of their success over the long term.

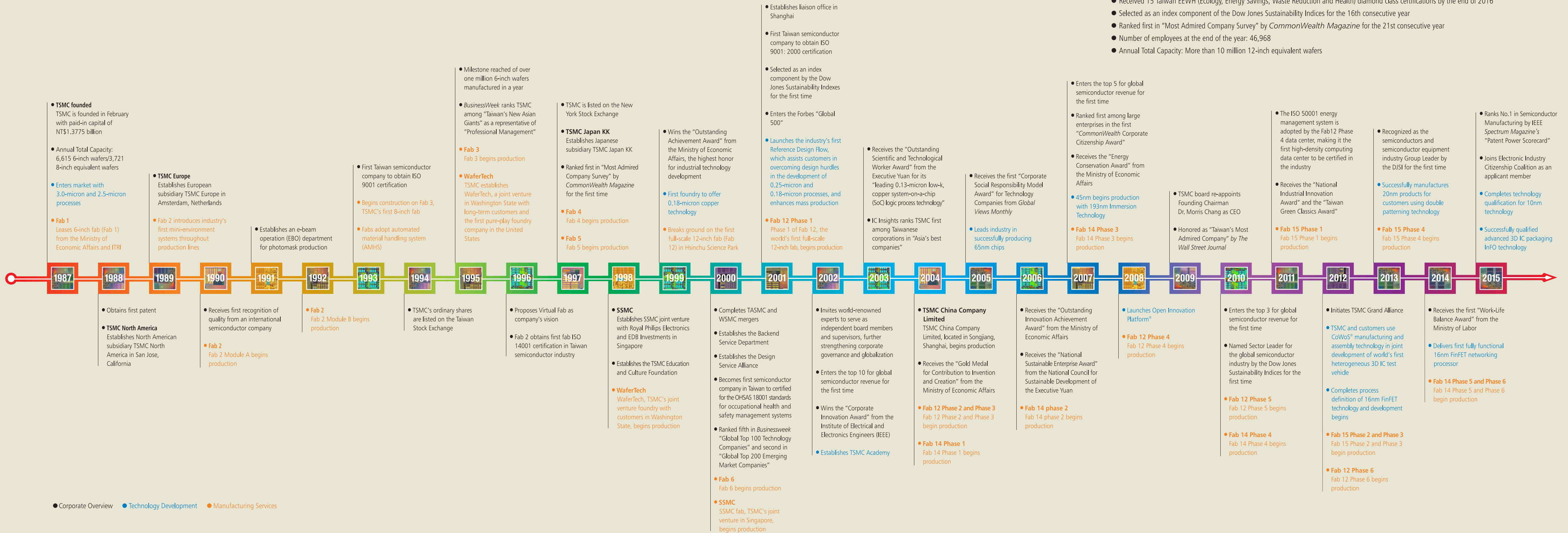
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30 Years of TSMC Technology Innovation



# 30 Years of TSMC





2016 was a good year for TSMC as we delivered another year of record revenue and earnings. Our revenue grew double-digit outpacing a relatively flat global semiconductor industry.





# Letter to Shareholders

## Dear Shareholders,

2016 was a good year for TSMC as we delivered another year of record revenue and earnings. Our revenue grew double-digit outpacing a relatively flat global semiconductor industry. We also achieved our highest gross and operating margin in the last twenty years, which is a direct result of our ongoing and unrelenting company-wide focus on driving productivity improvement, higher operating efficiency, and across-the-board cost reduction efforts.

TSMC's growth is propelled by our ability to earn a premium to the overall semiconductor industry's growth by being a trusted provider of technology and capacity to the world logic IC industry. This position allowed us to participate actively in the growth of the faster-growing segments, such as the strong demand from 4G+ smartphones in the China market, the replacement and upgrade of Gaming, and the emergence of AI (Artificial Intelligence) in 2016. These applications require the use of technologies over a wide spectrum, and TSMC holds a leading position over this spectrum. Our strong position in technology leadership and our commitment to invest in both R&D and in Capex are what enabled us to continually gain foundry market segment share.

We made significant advances in leading-edge process technologies in 2016. Revenue from 16-nanometer grew more than five-fold in 2016 and reached above 20% of total wafer revenue. Our 10-nanometer successfully began volume production for customers' products in 2016, while 7-nanometer is on schedule to complete technology qualification in early 2017. Our 5-nanometer development is also well-underway and will see use of EUV (extreme ultraviolet) lithography. Our proprietary InFO (integrated fan-out) advanced packaging solution was adopted by a major customer for a significant mobile product in 2016 while we were working on the next generation of InFO solution for 2017 volume production.

Highlights of TSMC's accomplishments in 2016:

- Total wafer shipments increased 9.6 percent from 2015 to reach 9.6 million 12-inch equivalent wafers.
- Advanced technologies (28-nanometer and beyond) accounted for 54 percent of total wafer revenue, up from 48 percent in 2015.
- We deployed 249 process technologies, and manufactured 9,275 products for 449 customers.
- TSMC's market share in the total semiconductor foundry segment rose successively during the last seven years and reached 56 percent in 2016.

## 2016 Financial Performance

Consolidated revenue totaled NT\$947.94 billion, an increase of 12.4 percent over NT\$843.50 billion in 2015. Net income was NT\$334.25 billion and diluted earnings per share were NT\$12.89. Both increased 9 percent from the 2015 level of NT\$306.57 billion net income and NT\$11.82 diluted EPS. Excluding major one-off items, namely share disposal gains and the closure of TSMC Solar operations in 2015 and the negative impact from the earthquake in 2016, our EPS would have grown 17.4 percent year-on-year in 2016.

In US dollars, TSMC generated net income of US\$10.38 billion on consolidated revenue of US\$29.43 billion, compared with net income of US\$9.67 billion on consolidated revenue of US\$26.61 billion in 2015.

Gross profit margin was 50.1 percent compared with 48.7 percent in 2015, and operating profit margin was 39.9 percent compared with 37.9 percent a year earlier. Net profit margin was 35.3 percent, a decrease of 1.0 percentage points from the prior year's 36.3 percent.

TSMC raised its cash dividend payment to NT\$6.0 per share for 2015 earnings distribution from NT\$4.5 a year ago to reflect continued rising free cash flow generation. We remain confident in our ability to maintain and steadily improve our free cash flow in the next few years, and will consider increasing the cash dividends when appropriate.

## Technological Developments

Thanks to continuous innovation and improvement, TSMC's 28-nanometer technology remained robust with rising revenue in 2016, its sixth year of volume production. We will continue to roll out differentiated and cost-effective solutions and expect our strength in this significant node to persist for many more years.

We continued to reduce defect density and improve cycle time in our 16-nanometer FinFET technology. In addition to mobile processors, this node has gained strong acceptance for many other applications including cellular baseband, graphic processors for video games, augmented reality and virtual reality devices, and artificial intelligence systems. We further pushed the envelope of performance, die size and power consumption to roll out our 12-nanometer technology, which will enter volume production in the second half of 2017. Both 16-nanometer and 12-nanometer technologies can serve customers in mainstream and ultra-low power market segments, including low-to-mid-end mobile phones, consumer electronics, digital TV, automotive, and Internet of Things (IoT), as well as high-end applications, including high-end mobile and networking.

10-nanometer FinFET technology began production ramp in the fourth quarter of 2016 with shipments commencing in the first quarter of 2017. We expect a healthy ramp throughout 2017. With its aggressive geometric shrinkage, our 10-nanometer technology provides excellent density and is well positioned to serve the premium mobile market segment.

During the year, we collaborated with major customers and IP vendors to complete the IP design for our 7-nanometer technology and started silicon validation. We are on plan to start risk production in the spring of 2017. Meanwhile, development activities for our 5-nanometer node continued with risk production targeted for first half of 2019. We plan to use EUV lithography extensively at 5-nanometer to reduce process complexity. In addition, intensive early development efforts focusing on new transistors and technology definition were on-going for the technologies beyond 5-nanometer.



In the area of advanced packaging technologies, TSMC's proprietary InFO began volume production in 2016 while we also successfully qualified the next generation InFO solution with volume production expected in 2017. We extended our interposer CoWoS (chip-on-wafer-on substrate) technology to 16-nanometer and led the industry with volume production of super high-end accelerators that integrate multiple second generation high bandwidth memory chips (HBM2) and GPUs (Graphics Processing Unit) for the high performance computing market segment of artificial intelligence and deep learning.

TSMC's ecosystem, the Open Innovation Platform (OIP), continued to expand in 2016 with more than 12,000 items contained in our libraries and silicon IP portfolio. More than 8,200 technology files and over 270 process design kits were available to customers via TSMC-Online which saw more than 100,000 customer downloads in 2016.

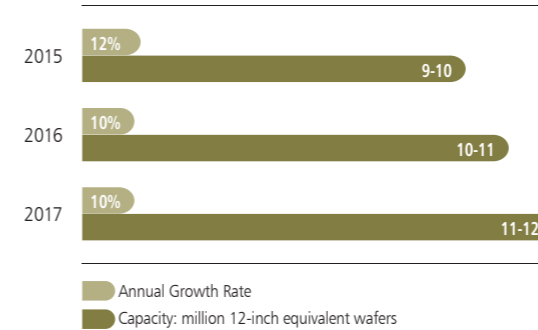
### Corporate Developments

In March 2016, TSMC and the municipal government of Nanjing, China signed an agreement affirming that TSMC will make an investment to establish TSMC Nanjing Co. Ltd., a wholly-owned subsidiary of TSMC that will own and operate a 12-inch wafer fab and a design service center. The purpose is to provide closer support to customers as we expand our business opportunities in China. The facility is scheduled to commence production of 16-nanometer process technology in the second half of 2018.

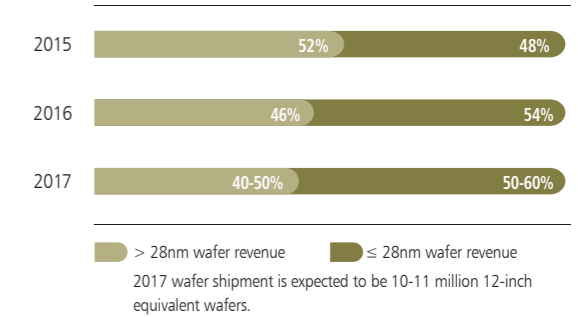
### Honors and Awards

TSMC received recognitions for achievements in innovation, business information disclosure, corporate governance, sustainability, investor relations and overall excellence in management from organizations including *Newsweek*, *CommonWealth Magazine*, PricewaterhouseCoopers, *GlobalViews Magazine*, *Channel NewsAsia*, RobecoSAM and the Taiwan Stock Exchange. TSMC received multiple awards from *Institutional Investor Magazine* and was ranked number one in *IR Magazine's* Global Top Fifty Awards. TSMC was also selected as a component of the Dow Jones Sustainability Indices for a 16th consecutive year, reflecting our ongoing commitment to sustainability and corporate social responsibility. In 2016, TSMC was included as the largest component in the newly-launched FTSE4Good Emerging Index by the London Stock Exchange, and we remained a major component in MSCI Global Sustainability Indexes, an important global benchmark for CSR.

### Capacity Plan



### Wafer Sales Plan




### Outlook

Entering our fourth decade, TSMC has advanced into the forefront of semiconductor technology and has grown to become the world's largest wafer capacity provider for logic ICs. TSMC's innovative foundry business model has flourished and placed us at the center of a comprehensive ecosystem of IC designers, IP providers, and equipment suppliers with unmatched ability to unleash innovation. ICs manufactured by TSMC formed the backbone of information technology today.

As silicon becomes pervasive and computing is ubiquitous, the intelligent future requires continued advancement and innovation in semiconductor process technologies. As our technology development collecting pace, we now can provide our customers the most competitive leading-edge technology to develop their product. Combined with their innovative algorithm, customized architecture and strength in designs, our customers are able to provide the most competitive products in the applications where they were not used to compete before. Through our customers, we are expanding our footprint into the global high performance computing market as well.



TSMC has evolved over the last three decades, but our core values of integrity, commitment, innovation, and customer trust remain unchanged. We remain committed to creating value and generating strong returns to shareholders who have placed their trust with us. As we carry our heritage of excellence forward into an exciting future, we look forward to prospering together with our shareholders.

  
 Morris Chang  
 Chairman





TSMC is the world's largest semiconductor foundry, manufacturing 9,275 different products using 249 distinct technologies for 449 different customers in 2016.





# Company Profile

## 2.1 An Introduction to TSMC

Established in 1987 and headquartered in Hsinchu Science Park, Taiwan, TSMC pioneered the pure-play foundry business model by focusing solely on manufacturing customers' designs. The Company does not design, manufacture or market semiconductor products under its own brand name, ensuring that it does not compete directly with its customers. Today, TSMC is the world's largest semiconductor foundry, manufacturing 9,275 different products using 249 distinct technologies for 449 different customers in 2016.

With such a large and diverse global customer base, TSMC-manufactured semiconductors are used in a wide variety of applications covering various segments of the computer, communications, consumer, industrial and standard semiconductor markets. Such strong diversification helps to smooth fluctuations in market demand, which, in turn, leads to higher levels of capacity utilization and profitability.

Annual capacity of the manufacturing facilities managed by TSMC and its subsidiaries reached above 10 million 12-inch equivalent wafers in 2016. These facilities include three 12-inch wafer GIGAFAB® facilities, four 8-inch wafer fabs, and one 6-inch wafer fab in Taiwan, as well as two 8-inch wafer fabs at wholly owned subsidiaries: WaferTech in the United States and TSMC China Company Limited.

In March 2016, TSMC and the municipal government of Nanjing, China signed an investment agreement affirming that TSMC will make an investment to establish TSMC Nanjing Company Limited, a wholly-owned subsidiary managing a 12-inch wafer fab and a design service center. Planned capacity is 20,000 12-inch wafers per month. The facility is scheduled to commence production of 16nm process technology in the second half of 2018. The purpose is to provide closer support to customers as well as expand TSMC's market share and business opportunities in China in step with the rapid growth of the Chinese semiconductor market over the last several years.

TSMC provides customer service through its account management and engineering services offices in North

America, Europe, Japan, China, South Korea and India. The Company employed about 47,000 people at the end of 2016.

The Company is listed on the Taiwan Stock Exchange (TWSE) under ticker number 2330, and its American Depositary Shares (ADSs) are traded on the New York Stock Exchange (NYSE) under the symbol TSM.

## 2.2 Market/Business Summary

### 2.2.1 TSMC Achievements

In 2016, TSMC maintained its leading position in the total foundry segment of the global semiconductor industry, with an estimated market share of 56%, despite intense competition from both established players and relatively new entrants to the business.

Leadership in advanced process technologies is a key factor in the Company's strong market position. In 2016, 54% of TSMC's wafer revenue came from manufacturing processes with geometries of 28nm and below.

With TSMC's focus on customer trust, the Company strengthened its Open Innovation Platform® (OIP) initiative in 2016 with additional services. During the 2016 Open Innovation Platform® Ecosystem Forum, held in September in San Jose, California, and in October in Beijing, the Company revealed 7nm FinFET Reference Flow (both full-chip and IP design), which highlighted the success of OIP-enabled design. Both forums were well attended by customers and ecosystem partners and demonstrated the value of collaboration through OIP to foster innovation.

TSMC offers the foundry segment's widest technology portfolio and continues to invest in advanced technologies and specialty technologies, which are key differentiators vis-à-vis our competitors and provide customers more added value.

Technologies that the Company either developed or introduced in 2016 include:

### Logic Technology

- 7nm FinFET (Fin field-effect transistor) technology made good developmental progress. Risk production of this technology is planned in April 2017. A very fast yield ramp-up is expected as more than 95% of tools for 7nm FinFET are compatible with those for 10nm FinFET. Compared to 10nm FinFET, 7nm FinFET offers approximately a 25% speed improvement or a 35% power reduction. In addition, 7nm FinFET can be optimized for mobile applications and high-performance computing devices.
- 10nm FinFET technology began production ramp-up in the fourth quarter of 2016 and started shipments in the first quarter of 2017. Thanks to its aggressive geometric shrinkage, this technology provides excellent density/cost benefits. It can be of use to customers in performance-driven market segments, including mobile, server and graphics.
- 16nm FinFET Plus technology (16FF+) received over 50 product tape-outs in 2016, bringing the total of product tape-outs to over 90 since this technology entered volume production in 2015. And most of them achieved first-time silicon success. This technology is aimed at customers in high-performance market segments, including mobile, server and graphics. The cost-effective 16nm FinFET Compact technology (16FFC) started volume production in the first quarter of 2016. 16FFC can maximize die cost scaling by incorporating optical shrink and process simplification at the same time. In addition, the development of 12nm FinFET Compact technology (12FFC) is progressing smoothly. This technology, which drives die size and power consumption to the best levels of the foundry's 16/14nm technology, is expected to enter volume production in the second half of 2017. Both 16FFC and 12FFC can satisfy customers in mainstream and ultra-low-power (ULP) market segments, including low-end to mid-range mobile phones, consumer electronics, digital TV and the IoT (internet of things). With innovative structures, 16FFC and 12FFC can also be used in more advanced applications, including high-end mobile and networking.
- 28nm High Performance Compact (28HPC) technology led the way in mainstream smartphones, DTVs, storage and SoC applications. 28HPC enables smaller die size circuit designs, less over-design and extraordinary power reduction with

excellent process control and optimized design rules.

- 28nm High Performance Compact Plus (28HPC+) technology provided further performance enhancement or power reduction in mainstream smartphones, DTVs, storage, audio and SoC applications. Compared to 28HPC, 28HPC+ improves device performance by 15% or reduces leakage by 50%. 28HPC+ also enables low Vdd (voltage drain) designs in ULP applications for the IoT market. In addition, this process is seamlessly applicable to the 28nm ecosystem, accelerating time-to-market for customers.
- 40nm ULP and RF technologies started production in the first quarter of 2016 for the IoT and wearable devices related applications, such as wireless connectivity, application processors and sensor hub applications.
- 55nm Ultra-Low Power (55ULP) technology went into production, with more than 10 customers having already taped out using this technology. Compared to 55nm Low Power (55LP) process, 55ULP can significantly increase battery life for IoT applications. In addition, it integrates RF and eFlash (embedded flash) to simplify customers' SoC designs.

### Specialty Technology

- 16FFC foundation IPs passed the Automotive Electronic Council AEC-Q100 Grade-1 qualification and were certified for functional safety standard ISO 26262 ASIL-B. In addition, TSMC 9000A was introduced for automotive IP management to complete the automotive ecosystem with third-party IP vendors.
- 16FFC RF technology started production in the first quarter of 2016. This technology supports wireless connectivity applications, including smartphones, wireless local area networks (WLAN), and fifth generation (5G) mobile networks.
- 28nm RF (28HPC RF and 28HPC+ RF) technologies offered extreme high-frequency devices, reliable model and comprehensive design support for wireless components in smartphone, automotive and IoT markets.
- 40nm eFlash started volume production in the first quarter of 2016 for applications such as high-endurance security MCU (microcontroller unit), wireless MCU, and high-performance MCU, as well as IoT devices.
- 40nm ULP eFlash was developed and started volume production in the second half of 2016 for applications such as wireless MCU, IoT devices, wearable devices and high-performance MCU.

- 40nm high-voltage technology was qualified with 6V and 8V offerings for top-end smartphone LCD and AMOLED (active matrix organic LED) display drivers. This technology can improve display quality and reduce power consumption significantly.
- 55nm eFlash technologies passed AEC-Q100 qualification for automotive and started volume production in the first quarter of 2016 for automotive applications such as body control module (BCM), electric power steering (EPS) and electric vehicles (EV)/hybrid electric vehicles (HEV).
- CIS NIR+ (CMOS image sensor near infra-red plus) technology was successfully developed for higher (2X~3X) NIR quantum efficiency. This technology could enable depth sensing for the AR/VR (augmented reality/virtual reality) market and optical authentication for the smartphone market.
- 0.13 $\mu$ m Bipolar-CMOS-DMOS (BCD) process started volume production on both 8-inch and 12-inch wafers in 2016. This process in 12-inch fabs extended qualification for AEC-Q100 Grade-0 in the first half of 2015.
- 0.18 $\mu$ m BCD third generation passed process validation by customers. This technology, which provides superior cost competitiveness compared to the second generation, started production in the second half of 2016.
- 0.5 $\mu$ m GaN (gallium nitride) on silicon 650V E-HEMT (enhanced-mode high electron mobility transistor), 650V D-MISFET (depletion-mode metal-insulator-semiconductor field-effect transistor), 100V E-HEMT and 30V D-HEMT (depletion-mode high electron mobility transistor) processes were qualified for discrete power applications. GaN on silicon technology offers high power density and efficiency in power applications.
- Successfully developed Si-pillar WLCSP (wafer level chip scale packaging) technology, which can be applied to customers' CMOS-MEMS (micro-electromechanical systems) motion sensor SoC designs, creating the world's smallest packaging dimension, as small as 1.1mm by 1.3mm.

#### Advanced Packaging Technology

- Integrated Fan-Out Package on Package (InFO-PoP) technology that integrates 16nm SoC and DRAM for advanced mobile products began volume production in the second quarter of 2016. It enables a thinner package, 10% less thermal resistance, more logic I/Os, and 5 to 10% higher maximum operating frequency for application processor.

- CoWoS<sup>®</sup> (chip on wafer on substrate) XL technology homogeneously integrating multiple 20nm logic chips and heterogeneously integrating 16nm SoC plus four stacks of 4-hi (4 high) second generation high bandwidth memory (HBM2) began production in the first half of 2016. Integration of 16nm SoC, larger interposer (>1400mm<sup>2</sup>) and more than four 8-hi (8 high) HBM2 stacks is expected to be developed in 2017.
- Fine pitch (80 $\mu$ m) BoT (Bump-on-Trace) Cu bump for flip chip packaging on  $\geq$ 16nm silicon continued volume production in 2016. Cu bump on 10nm silicon was qualified for production start-up in 2017. Volume production also continued on  $\geq$ 28nm silicon in WLCSP technologies for high-end smartphone applications in 2016. 16nm WLCSP qualification was started and is expected to be completed in the first half of 2017.

#### 2.2.2 Market Overview

TSMC estimates that the worldwide semiconductor market in 2016 was US\$357 billion in revenue, representing 1% year-over-year growth, continuing the flattish growth in 2015. In the foundry sub-segment of the semiconductor industry, total revenue was US\$47 billion in 2016, representing 8% YoY growth.

#### 2.2.3 Industry Outlook, Opportunities and Threats

##### Industry Demand and Supply Outlook

The increase in the foundry segment growth to 8% in 2016 from 4% in 2015 was driven mainly by healthier market and inventory replenishment.

TSMC forecasts the total semiconductor market to grow 4% in 2017. Over the longer term, driven by increasing semiconductor content in electronic devices, continuing market share gains by fabless companies, gradual increase of IDM outsourcing, and expanding in-house Application-Specific Integrated Circuits (ASIC) from system companies, the Company expects foundry segment revenue growth to be much stronger than the 3% compound annual growth rate projected for the total semiconductor industry from 2015 through 2020.

As an upstream supplier in the semiconductor supply chain, the foundry segment is tightly correlated with the market health of the three Cs, communications, computer, consumer, and the emerging IoT (Internet of Things).

##### • Communications

The communications sector, particularly the Smartphone segment, posted a 6% growth in unit shipments for 2016. Although the growth is slowing down, continuing transition to 4G/LTE and LTE-Advanced will bring about mid-single digit growth to the Smartphone market in 2017. Smartphones with increasing performance, longer battery life, and more intelligent features will continue to propel buying interests. The increasing popularity of low-end smartphones in emerging countries will also drive the growth of the sector.

Low-power IC is an essential requirement among handset manufacturers. The SoC design for more optimized cost, power and form factor (device footprint and thickness), plus the appetite for higher performance to run complex software and higher resolution video will continue to accelerate the migration to advanced process technologies, in which TSMC is already the leader.

##### • Computer

After an 8% decline in 2015, the computer sector's unit shipments dropped 6% YoY in 2016. The decline was due to prolonged replacement cycle and consumer usage moving towards mobile computing.

The personal computer market is expected to decline by mid-single digit percentage in 2017. Increasing variety (e.g. Convertible, Ultrabook and Chromebook), the business adoption of Windows 10, and consumer replacements of aging PCs, however, are expected to help buoy PC demand.

In terms of process technologies used in computers, requirements of lower power, higher performance and the integration of key computer components such as CPU, GPU, Chipset, etc., should drive demand for product refresh towards leading process technologies.

##### • Consumer

The consumer sector's unit shipments declined 5% in 2016 comparing to 2015. Set-top boxes and TV game consoles showed positive growth, while the rest of the sector – TVs, MP3 players, digital cameras and hand-held game consoles – continued to decline due to unsettled environment in Eurozone and foreign exchange issues, as well as functional cannibalization by smartphones.

Although consumer electronics will continue to decline in 2017, TV game consoles, 4K (UHD) TVs, and over-the-top (OTT) set-top boxes should achieve high growth within the sector. TSMC will be able to capture these trends with advanced technology offerings.

##### • IoT

The Internet of Things (IoT) is taking shape as the “next big thing,” since more and more devices are being connected to the Internet. The IoT will have 10X greater installed unit potential than the smartphone will have in 2025. Applications and products benefiting from IoT related technologies include smart wearables, home robots, smart meters, smart manufacturing, self-driving cars, and so on. These applications and products will require much longer battery life, diversified sensors and low-power wireless connections, which will challenge technology development in new ways. TSMC's ultra-low-power logic and RF solutions and diversified sensing technologies will lead the way for this future growth.

#### Supply Chain

The electronics industry consists of a long and complex supply chain, the elements of which are highly dependent and correlated with each other. At the upstream IC manufacturing level, IC vendors need to have sufficient and flexible supply to handle the demand dynamics. The foundry vendors are playing an important role to ensure the health of the supply chain. As a leader in the foundry segment, TSMC provides leading technologies and large-scale capacity to complement the innovations created along the downstream chain.



## 2.2.4 TSMC Position, Differentiation and Strategy

### Position

TSMC is the worldwide semiconductor foundry leader for both advanced and specialty process technologies, commanding a 56% market share in 2016. Net revenue by geography, based mainly on the country in which customers are headquartered, was: 65% from North America; 15% from the Asia Pacific region, excluding China and Japan; 9% from China; 6% from Europe, the Middle East and Africa; and 5% from Japan. Net revenue by end-product application was: 8% from the computer sector, 62% from communications, 9% from consumer products, and 21% from industrial and standard products.

### Differentiation

TSMC's leadership position is based on three defining competitive strengths and a business strategy rooted in the Company's heritage. The Company distinguishes itself from the competition through its technology leadership, manufacturing excellence and customer trust.

As a technology leader, TSMC is consistently first among dedicated foundries to provide next-generation, leading-edge technologies. The Company has also established its leadership on more mature technology nodes by applying the lessons learned on leading-edge technology development to enrich its specialty technologies to more advanced process nodes. Beyond process technology, TSMC has established frontend and backend integration capabilities that result in faster time-to-production and create the best power, performance and area sweet spot.

TSMC has gained manufacturing acclaim for its industry-leading management and is extending that leadership through its Open Innovation Platform® and Grand Alliance initiatives. The TSMC Open Innovation Platform® initiative hastens the pace of innovation in the semiconductor design community and among its ecosystem partners, as well as the Company's IP, design implementation and design for manufacturing capabilities, process technology and backend

services. A key element is a set of ecosystem interfaces and collaborative components initiated and supported by TSMC that more efficiently empower innovation throughout the supply chain and drive the creation and sharing of new revenue and profits. The TSMC Grand Alliance is one of the most powerful forces for innovation in the semiconductor industry, bringing together customers, electronic design automation (EDA) partners, IP partners, and key equipment and material suppliers at a new, higher level of collaboration. Its objective is to help customers, alliance members and TSMC win business and stay competitive.

The foundation for customer trust is a commitment TSMC made when it opened for business in 1987: to never compete with its customers. As a result, TSMC has never owned or marketed a single semiconductor product design, but instead has focused all of its resources on becoming the trusted foundry for its customers.

### Strategy

TSMC is confident that its differentiating strengths will enable it to prosper from the foundry segment's many attractive growth opportunities. In light of the rapid growth in four major markets, namely mobile, high-performance computing, automotive electronics, and the Internet of things, and the fact that focus of customer demand is shifting from process-technology-centric to product-application-centric, TSMC has constructed four different technology platforms to provide customers with the most comprehensive and competitive logic process technologies, specialty technologies, IPs, and packaging and testing technologies to shorten customers' time-to-design and time-to-market.

**Mobile platform:** TSMC will offer leading 7nm FinFET, 10nm FinFET, 16FF+, 20nm SoC, 28nm High Performance (HP), and 28nm High Performance Mobile (28HPM) logic process technologies as well as comprehensive IPs for high-end product applications to further enhance chip performance, reduce power consumption, and decrease chip size. For low-end to mid-range product applications, TSMC will offer 12FFC, 16FFC, 28nm Low Power (LP), 28nm High Performance Low Power

(HPL), 28HPC, 28HPC+, and 22ULP logic process technologies in addition to comprehensive IPs to satisfy customer needs for high-performance and low-power chips. Furthermore, for high-end or low- to mid-level product applications, TSMC also offers the most competitive, leading-edge specialty technologies, including RF, embedded flash memory, emerging memory technologies, power management, sensors, and display chips and advanced packaging technologies such as the leading integrated fan-out (InFO) technology.

**High-performance computing platform:** TSMC will offer customers leading 7nm, 16nm FinFET and 28nm logic process technologies, as well as comprehensive IPs, including high speed interconnect IPs, to meet customers' high performance computing and transmission requirements. TSMC also offers multiple advanced packaging technologies such as CoWoS® and 3D IC technologies to enable homogeneous and heterogeneous chip system integration to meet customers' high performance, low power, and smaller system footprint requirements. TSMC will continue to optimize our high performance computing platform offerings to help customers capture market growth driven by massive data and applications, including data analytics, artificial intelligence, and 5G wireless communications.

**Automotive electronics platform:** TSMC will offer leading 7nm FinFET, 16nm FinFET, 28nm, and 40nm logic process technologies, various leading and competitive specialty technologies in RF, embedded flash memory, sensors, multiple power management technologies that pass the AEC-Q100 Grade-0 qualifications, and many advanced packaging technologies.

**IoT platform:** TSMC will provide customers with leading ULP logic process technology options, from 16nm, 12nm, 28nm, 40nm to 55nm, the most competitive and leading-edge specialty technologies in RF, embedded flash memory, emerging memory, sensors, and display chips, as well as, multiple advanced packaging technologies including the leading InFO technology.

TSMC continually strengthens its core competitiveness and deploys both short-term and long-term technology and business development plans, and assists customers in taking on the challenges of short product cycles and intense competition in the electronic products market to meet ROI and growth objectives.

### • Short-Term Semiconductor Business Development Plan

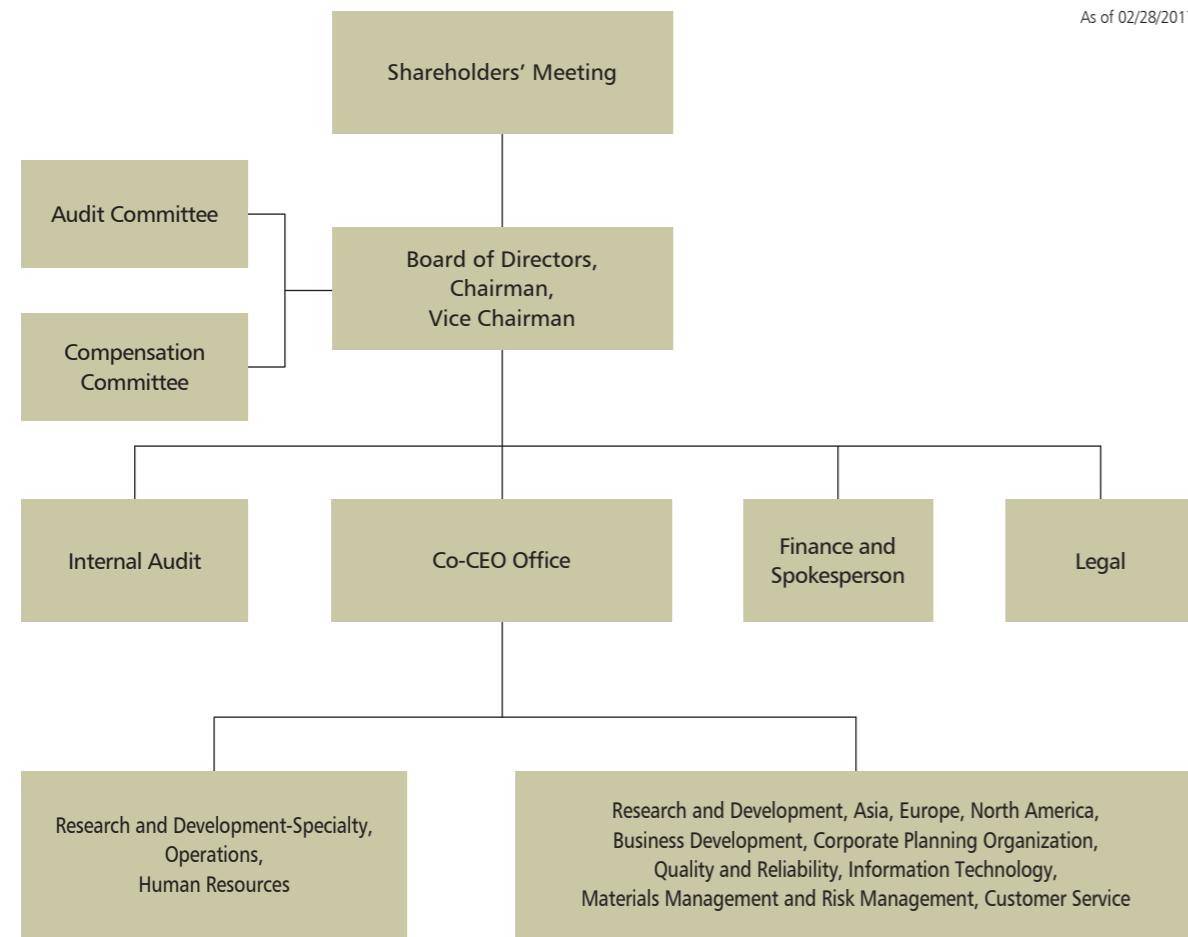
1. Substantially ramp up the business and sustain advanced technology market share by increased capacity investment.
2. Maintain mainstream technology market share by expanding business to new customers and market segments with off-the-shelf technologies.
3. Continue to enhance the competitive advantages of TSMC's platforms in mobile, high-performance computing, automotive electronics, and IoT design ecosystems so as to expand TSMC's dedicated foundry services in these product applications.
4. Further expand TSMC's business and service infrastructure into emerging and developing markets.

### • Long-Term Semiconductor Business Development Plan

1. Continue developing leading-edge technologies at a pace consistent with Moore's Law.
2. Broaden specialty business contributions by further developing derivative technologies.
3. Provide more integrated services, covering system-level integration design, design technology definition, design tool preparation, wafer processing, and backend services, all of which deliver more value to customers through optimized solutions.

## 2.3 Organization

### 2.3.1 Organization Chart



### 2.3.2 Major Corporate Functions

#### Operations

- Operations of all fabs including in Taiwan and overseas; product development, manufacturing technology development, and backend technology development and production

#### Human Resources

- Human resources management and organizational development, as well as proprietary information protection and physical security management

#### Research and Development

- Advanced and specialty technology development and exploratory research, as well as design and technology platform development

#### Asia

- Sales, market development, field technical support and service for customers in Asia

#### Europe

- Technical marketing, field technical support and service for customers in Europe

#### North America

- Sales, market development, field technical support and service for customers in North America

#### Business Development

- Business development for electronic products, identification of new applications, development of markets for specialty technology, exploration and development of new markets, and strengthening customer relations, as well as managing the Company's brand

#### Corporate Planning Organization

- Planning for operational resources, as well as for production and demand; the integration of business processes, corporate pricing, market analysis and forecasting

#### Quality and Reliability

- Assurance of the quality and reliability of the Company's products via: resolution of reliability issues at development stage, improvement and management of production quality, solutions for customers' quality related issues, services for advanced materials and failure analysis

#### Information Technology

- Integration of the Company's technology and business IT systems; infrastructure development, communication services and assurance of IT security and service quality

#### Materials Management and Risk Management

- Procurement, warehousing, import and export, and logistics support; also environmental protection, industrial safety, occupational health, and risk management

#### Customer Service

- Support and service for customers in Asia, Europe, and North America

#### Internal Audit

- Inspection and review of TSMC's internal control system, its adequacy in design and effectiveness in operation with independent risk assessment to ensure compliance with TSMC's policies and procedures as well as with external regulations

#### Finance and Spokesperson

- Corporate finance, accounting and corporate communications; the head of the organization also serves as company spokesperson

#### Legal

- Corporate legal affairs including regulatory compliances, commercial transactions, patents and management of other intellectual properties, litigation, etc.



## 2.4 Board Members

### 2.4.1 Information Regarding Board Members

As of 02/28/2017

Title/Name	Gender	Nationality or Place of Registration	Date Elected	Term Expires	Date First Elected	Shareholding When Elected		Current Shareholding		Spouse & Minor Shareholding		Selected Education, Past Positions & Current Positions at Non-profit Organizations	Selected Current Positions at TSMC and Other Companies
						Shares	%	Shares	%	Shares	%		
Chairman Morris Chang	Male	U.S.A.	06/09/2015	06/08/2018	12/10/1986	125,137,914	0.48%	125,137,914	0.48%	135,217	0.00%	Bachelor Degree in Mechanical Engineering, MIT Master Degree in Mechanical Engineering, MIT Ph.D. in Electrical Engineering, Stanford University  Former Group Vice-President, Texas Instruments Inc. Former President & COO, General Instrument Corporation Former Chairman, Industrial Technology Research Institute Former CEO, TSMC  Member of National Academy of Engineering Life Member Emeritus of MIT Corporation Fellow of the Computer History Museum Laureate of the Industrial Technology Research Institute	None
Vice Chairman F.C. Tseng	Male	R.O.C.	06/09/2015	06/08/2018	05/13/1997	34,472,675	0.13%	34,472,675	0.13%	132,855	0.00%	Bachelor Degree in Electrical Engineering, National Chengkung University Master Degree in Electrical Engineering, National Chiao Tung University Ph.D. in Electrical Engineering, National Chengkung University Honorary Ph.D., National Chiao Tung University  Former President, Vanguard International Semiconductor Corp. Former President, TSMC Former Deputy CEO, TSMC Former Director, National Culture and Arts Foundation, R.O.C.  Chairman, TSMC Education and Culture Foundation	Chairman of: - TSMC China Company Ltd. - Global UniChip Corp. Vice Chairman, Vanguard International Semiconductor Corp. Independent Director, Chairman of Audit Committee & Compensation Committee member, Acer Inc.
Director National Development Fund, Executive Yuan (Note 1) Representative: Johnsee Lee	Male	R.O.C.	06/09/2015	06/08/2018	12/10/1986  08/06/2010 (Note 2)	1,653,709,980	6.38%	1,653,709,980	6.38%	-	-	Ph.D. in Chemical Engineering, Illinois Institute of Technology MBA, University of Chicago Graduate of Harvard Business School's Advanced Management Program  Former Principal Investigator, Argonne National Laboratory Former Senior Manager, Johnson Matthey Inc. Former President, Industrial Technology Research Institute Former Chairman, Development Center for Biotechnology  Managing Director, Development Center for Biotechnology Honorary Chairman, Taiwan Bio Industry Organization	CEO, Personal Genomics, Inc. Independent Director of: - Far Eastern New Century Corp. - Zhen Ding Technology Holding Ltd. - Everlight Electronics Co., Ltd. - San Fu Chemical Co., Ltd.
Independent Director Sir Peter Leahy Bonfield	Male	UK	06/09/2015	06/08/2018	05/07/2002	-	-	-	-	-	-	Bachelor Degree in Engineering, Loughborough University Honours Degree in Engineering, Loughborough University  Former Chairman and CEO, ICL Plc Former CEO and Chairman of the Executive Committee, British Telecommunications Plc Former Vice President, the British Quality Foundation  Fellow of the Royal Academy of Engineering Chair of Council and Senior Pro-Chancellor, Loughborough University, UK	Chairman of: - NXP Semiconductors N.V., the Netherlands - Global Logic Inc., U.S.A. Member, The Longreach Group Advisory Board Board Mentor, CMi Senior Advisor to: - Alix Partners, London - G3 Good Governance Group, London.
Independent Director Stan Shih	Male	R.O.C.	06/09/2015	06/08/2018	04/14/2000	1,480,286	0.01%	1,480,286	0.01%	16,116	0.00%	BSEE, National Chiao Tung University MSEE, National Chiao Tung University Honorary EE Ph.D., National Chiao Tung University Honorary Doctor of Technology, The Hong Kong Polytechnic University Honorary Fellowship, University of Wales, Cardiff, UK Honorary Doctor of International Law, Thunderbird, American Graduate School of International Management, U.S.A.  Co-Founder, Chairman Emeritus, Acer Group Former Chairman & CEO, Acer Group Former Chairman, National Culture and Arts Foundation, R.O.C.  Director, Public Television Service Foundation, R.O.C. Council member of Asian Corporate Governance Associate (ACGA) Chairman of Stans Foundation	Director & Honorary Chairman, Acer Inc. Director of: - Qisda Corp. - Wistron Corp. - Nan Shan Life Insurance Co., Ltd. - Egis Technology Inc. - Digitimes Inc. - Chinese Television System Inc.

(Continued)

Title/Name	Gender	Nationality or Place of Registration	Date Elected	Term Expires	Date First Elected	Shareholding When Elected		Current Shareholding		Spouse & Minor Shareholding		Selected Education, Past Positions & Current Positions at Non-profit Organizations	Selected Current Positions at TSMC and Other Companies
						Shares	%	Shares	%	Shares	%		
Independent Director Thomas J. Engibous	Male	U.S.A.	06/09/2015	06/08/2018	06/10/2009	-	-	-	-	-	-	Bachelor Degree in Electrical Engineering, Purdue University Master Degree in Electrical Engineering, Purdue University Honorary Doctorate in Engineering, Purdue University  Former Executive Vice President and President of the Semiconductor Group, Texas Instruments Inc. Former President and CEO, Texas Instruments Inc. Former Chairman of the Board, Texas Instruments Inc. Former Chairman of the Board of Catalyst Former Chairman of the Board of J.C. Penney Company, Inc. Former Lead Director, J.C. Penney Company, Inc.  Member of National Academy of Engineering Member of Texas Business Hall of Fame Honorary Director of Catalyst Honorary Trustee, Southwestern Medical Foundation	None
Independent Director Kok-Choo Chen	Female	R.O.C.	06/09/2015	06/08/2018	06/09/2011	-	-	-	-	5,120	0.00%	Inns of Court School of Law, England Barrister-at-law, England Advocate & Solicitor, Singapore Attorney-at-law, California, U.S.A.  Lawyer, Tan, Rajah & Cheah, Singapore, 1969-1970 Lawyer, Sullivan & Cromwell, New York, U.S.A., 1971-1974 Lawyer, Heller, Erhman, White & McAuliffe, San Francisco, California, U.S.A., 1974-1975 Partner, Ding & Ding Law Offices, Taiwan, 1975-1988 Partner, Chen & Associates Law Offices, Taiwan, 1988-1992 Former Vice-President, Echo Publishing, Taiwan, 1992-1995 Former President, National Culture and Arts Foundation, R.O.C., 1995-1997 Former Senior Vice-President & General Counsel, TSMC, 1997-2001 Founder & Executive Director of Taipei Story House, 2003-2015 Former Advisor, Executive Yuan, R.O.C., 2009-2016 Former Director, National Culture and Arts Foundation, R.O.C., 2011-2016 Former Chairman, National Performing Arts Center, 2014-January 2017  Lecturer, Nanyang University, Singapore, 1970-1971 Associate Professor, Soochow University, 1981-1998 Chair Professor, National Tsing Hua University, 1999-2002 Professor, National Chengchi University, 2001-2004 Professor, Soochow University, 2001-2008  Founder and Executive Director, Museum207 (located in Taipei) Director, Republic of China Female Cancer Foundation	None
Independent Director Michael R. Splinter	Male	U.S.A.	06/09/2015	06/08/2018	06/09/2015	-	-	-	-	-	-	Bachelor and Master Degrees in Electrical Engineering, University of Wisconsin Madison Honorary Ph.D. in Engineering, University of Wisconsin Madison  Former Executive Vice President of Technology and Manufacturing group, Intel Corporation Former Executive Vice President of Sales and Marketing, Intel Corporation Former CEO, Applied Materials, Inc. Former Chairman, Applied Materials, Inc.  Director, Silicon Valley Leadership Group Director, Semiconductor Equipment and Materials International (SEMI) Director, University of Wisconsin Foundation	Director of: - The NASDAQ OMX Group, Inc. - Pica8, Inc. General Partner, WISC Partners LP

Remarks:

1. No member of the Board of Directors held TSMC shares by nominee arrangement.
2. No member of the Board of Directors had a spouse or relative within two degrees of consanguinity serving as a manager or director at TSMC.

Note 1: Major Shareholder of TSMC's Director that is an Institutional Shareholder.

Director that is an Institutional Shareholder of TSMC	Top 10 Shareholders
National Development Fund, Executive Yuan	Not Applicable

Major Institutional shareholders of National Development Fund: Not Applicable.

Note 2: Mr. Johnsee Lee was appointed as the representative of National Development Fund on August 6, 2010.



## 2.4.2 Remuneration Paid to Directors (Note 1)

Unit: NT\$ thousands

Title/Name	Director's Remuneration								Total Remuneration (A+B+C+D) as a % of 2016 Net Income								Compensation Earned by a Director Who is an Employee of TSMC or of TSMC's Consolidated Entities								Total Compensation (A+B+C+D+E+F+G) as a % of 2016 Net Income (Note 4)		Compensation Paid to Directors from Non-consolidated Affiliates (J)
	Base Compensation (A)		Severance Pay and Pensions (B) (Note 2)		Compensation to Directors (C)		Allowances (D) (Note 3)				Base Compensation, Bonuses, and Allowances (E)		Severance Pay and Pensions (F) (Note 2)		Employees' Profit Sharing Bonus (G)												
	From TSMC	From All Consolidated Entities	From TSMC	From All Consolidated Entities	From TSMC	From All Consolidated Entities	From TSMC	From All Consolidated Entities	From TSMC	From All Consolidated Entities	From TSMC	From All Consolidated Entities	From TSMC	From All Consolidated Entities	From TSMC		From All Consolidated Entities		From TSMC	From All Consolidated Entities							
															Cash	Stock (Fair Market Value)	Cash	Stock (Fair Market Value)									
Chairman Morris Chang	22,314	22,314	592	592	286,690	286,690	1,941	1,941	0.0932%	0.0932%	-	-	-	-	-	-	-	-	0.0932%	0.0932%	-						
Vice Chairman F.C. Tseng	12,585	12,585	334	334	9,600	9,600	1,778	1,778	0.0073%	0.0073%	-	-	-	-	-	-	-	-	0.0073%	0.0073%	4,512						
Independent Director Sir Peter Leahy Bonfield	-	-	-	-	15,514	15,514	-	-	0.0046%	0.0046%	-	-	-	-	-	-	-	-	0.0046%	0.0046%	-						
Independent Director Stan Shih	-	-	-	-	12,000	12,000	-	-	0.0036%	0.0036%	-	-	-	-	-	-	-	-	0.0036%	0.0036%	-						
Independent Director Thomas J. Engibous	-	-	-	-	15,514	15,514	-	-	0.0046%	0.0046%	-	-	-	-	-	-	-	-	0.0046%	0.0046%	-						
Independent Director Kok-Choo Chen	-	-	-	-	12,000	12,000	-	-	0.0036%	0.0036%	-	-	-	-	-	-	-	-	0.0036%	0.0036%	-						
Independent Director Michael R. Splinter	-	-	-	-	15,514	15,514	-	-	0.0046%	0.0046%	-	-	-	-	-	-	-	-	0.0046%	0.0046%	-						
Director National Development Fund, Executive Yuan Representative: Johnsee Lee	-	-	-	-	9,600	9,600	-	-	0.0029%	0.0029%	-	-	-	-	-	-	-	-	0.0029%	0.0029%	-						
<b>Total</b>	<b>34,899</b>	<b>34,899</b>	<b>926</b>	<b>926</b>	<b>376,432</b>	<b>376,432</b>	<b>3,719</b>	<b>3,719</b>	<b>0.1244%</b>	<b>0.1244%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.1244%</b>	<b>0.1244%</b>	<b>4,512</b>						

Note 1: Remuneration policies, standards/packages, procedures, the linkage to operating performance and future risk exposure: The base compensation for the Chairman, Vice-Chairman and directors are determined in accordance with the procedures set forth in TSMC's Articles of Incorporation. The Articles of Incorporation also provides that the compensation to directors shall be no more than 0.3% of annual profits and directors who also serve as executive officers of TSMC are not entitled to receive compensation to directors. The distribution of compensation to directors shall be made in accordance with TSMC's "Rules for Distribution of Compensation to Directors".

Note 2: Pensions funded/paid according to applicable law.

Note 3: The above-mentioned figures include expenses for Company cars and gasoline reimbursement, but do not include compensation paid to Company drivers (totaled NT\$4,815 thousand).

Note 4: Total remuneration and compensation of TSMC and all consolidated entities paid to TSMC's directors in 2015 were NT\$394,468 thousand, accounting for 0.13% of 2015 net income.

## 2.5 Management Team

### 2.5.1 Information Regarding Management Team

As of 02/28/2017

Title Name	Gender	Nationality	On-board Date (Note 1)	Shareholding		Spouse & Minor		TSMC Shareholding by Nominee Arrangement (Shares)		Education & Selected Past Positions	Selected Current Positions at Other Companies	Managers Who are Spouses or within Second-degree Relative of Consanguinity to Each Other		
				Shareholds	%	Shareholds	%	Shareholds	%			Title	Name	Relation
President and Co-Chief Executive Officer Mark Liu	Male	R.O.C.	11/15/1993	12,977,114	0.05%	-	-	-	-	Ph.D., Electrical Engineering & Computer Science, University of California, Berkeley, U.S. Executive Vice President and Co-Chief Operating Officer, TSMC Senior Vice President, Operations, TSMC Senior Vice President, Advanced Technology Business, TSMC President, Worldwide Semiconductor Manufacturing Corp.	None	None	None	None
President and Co-Chief Executive Officer C.C. Wei	Male	R.O.C.	02/01/1998	7,179,207	0.03%	261	0.00%	-	-	Ph.D., Electrical Engineering, Yale University, U.S. Executive Vice President and Co-Chief Operating Officer, TSMC Senior Vice President, Business Development, TSMC Senior Vice President, Mainstream Technology Business, TSMC Senior Vice President, Chartered Semiconductor Manufacturing Ltd.	Director, TSMC subsidiary	None	None	None
Senior Vice President and Chief Information Officer Information Technology, Materials Management and Risk Management Stephen T. Tso	Male	R.O.C.	12/16/1996	12,897,064	0.05%	-	-	-	-	Ph.D., Materials Science & Engineering, University of California, Berkeley, U.S. President, WaferTech, LLC Senior Vice President, Operations, TSMC General Manager of CVD Products, Applied Material, Inc.	Director, TSMC subsidiary	None	None	None
Senior Vice President, Chief Financial Officer and Spokesperson Finance Lora Ho	Female	R.O.C.	06/01/1999	4,481,080	0.02%	2,230,268	0.01%	-	-	Master, Business Administration, National Taiwan University, Taiwan Senior Director, Accounting, TSMC Vice President & CFO, TI-Acer Semiconductor Manufacturing Corp.	Director and/or Supervisor, TSMC subsidiaries Director, TSMC affiliates President, TSMC subsidiaries	None	None	None
Senior Vice President Research and Development/Technology Development Wei-Jen Lo	Male	R.O.C.	07/01/2004	1,464,127	0.01%	-	-	-	-	Ph.D., Solid State Physics and Surface Chemistry, University of California, Berkeley, U.S. Vice President, Research and Development, TSMC Vice President, Operations/Manufacturing Technology, TSMC Vice President, Advanced Technology Business, TSMC Vice President, Operation II, TSMC Director, Advanced Technology Development and CTM Plant Manager, Intel Corp.	None	None	None	None
Senior Vice President of TSMC and President of TSMC North America Rick Cassidy	Male	U.S.A.	11/14/1997	-	-	-	-	-	-	Bachelor, Engineering Technology, United States Military Academy at West Point, U.S. Vice President of TSMC North America Account Management	Director, TSMC subsidiary	None	None	None
Senior Vice President Operations/Product Development Y.P. Chin (Note 2)	Male	R.O.C.	01/01/1987	6,971,122	0.03%	2,194,107	0.01%	-	-	Master, Electrical Engineering, National Cheng Kung University, Taiwan Vice President, Advanced Technology and Business, TSMC Senior Director, Product Engineering & Services, TSMC	None	None	None	None
Senior Vice President Research and Development/Technology Development Y.J. Mii (Note 2)	Male	R.O.C.	11/14/1994	1,000,419	0.00%	-	-	-	-	Ph.D., Electrical Engineering, University of California, Los Angeles, U.S. Senior Director, R&D Platform I Division, TSMC	None	None	None	None
Vice President Operations/Affiliate Fabs M.C. Tzeng	Male	R.O.C.	01/01/1987	7,405,595	0.03%	-	-	-	-	Master, Applied Chemistry, Chungyuan University, Taiwan Vice President, Mainstream Technology Business, TSMC Senior Director, Fab 2 Operation, TSMC	Director, TSMC subsidiaries Director, TSMC affiliate	Deputy Director	M.J. Tzeng	Siblings
Vice President and Chief Technology Officer Research and Development/Corporate Research Jack Sun	Male	R.O.C.	06/02/1997	3,981,831	0.02%	-	-	-	-	Ph.D., Electrical Engineering, University of Illinois at Urbana-Champaign, U.S. Vice President, Research and Development, TSMC Senior Director, Logic Technology Division, TSMC Senior Manager of R&D, International Business Machines (IBM)	None	None	None	None
Vice President Quality and Reliability N.S. Tsai	Male	R.O.C.	03/01/2000	1,988,180	0.01%	1,103,253	0.00%	-	-	Ph.D., Material Science, Massachusetts Institute of Technology, U.S. Senior Director, Assembly Test Technology & Service, TSMC Vice President, Operations, Vanguard International Semiconductor Corp.	None	None	None	None
Vice President Operations/Mainstream Fabs and Manufacturing Technology J.K. Lin	Male	R.O.C.	01/01/1987	12,498,018	0.05%	1,048,387	0.00%	-	-	Bachelor, Science, National Changhua University of Education, Taiwan Senior Director, Mainstream Fabs, TSMC	Director, TSMC subsidiary Director, TSMC affiliate	None	None	None
Vice President Operations/300mm Fabs J.K. Wang	Male	R.O.C.	02/11/1987	2,553,947	0.01%	160,844	0.00%	-	-	Master, Chemical Engineering, National Cheng Kung University, Taiwan Senior Director, 300mm fab operations, TSMC	Director, TSMC subsidiary	None	None	None

(Continued)



Title Name	Gender	Nationality	On-board Date (Note 1)	Shareholding		Spouse & Minor		TSMC Shareholding by Nominee Arrangement (Shares)		Education & Selected Past Positions	Selected Current Positions at Other Companies	Managers Who are Spouses or within Second-degree Relative of Consanguinity to Each Other		
				Shareholds	%	Shareholds	%	Shareholds	%			Title	Name	Relation
Vice President Corporate Planning Organization Irene Sun	Female	R.O.C.	10/01/2003	420,709	0.00%	-	-	-	-	Ph.D., Materials Science and Engineering, Cornell University, U.S. Senior Director, Corporate Planning Organization, TSMC	None	None	None	None
Vice President Research and Development/Design and Technology Platform Cliff Hou	Male	R.O.C.	12/15/1997	352,532	0.00%	60,802	0.00%	-	-	Ph.D., Electrical Engineering, Syracuse University, U.S. Senior Director, Design and Technology Platform, TSMC	Director, TSMC subsidiaries Director, TSMC affiliate President, TSMC subsidiaries	None	None	None
Vice President Business Development Been-Jon Woo	Female	R.O.C.	04/30/2009	320,000	0.00%	51,000	0.00%	-	-	Ph.D., Chemistry, University of Southern California, U.S. Director of Business Development, TSMC Vice President of R&D, Grace Semiconductor Manufacturing Corp. Director of Technology Integration, Intel Corp.	None	None	None	None
Vice President and General Counsel Legal Sylvia Fang	Female	R.O.C.	03/20/1995	700,285	0.00%	419,112	0.00%	34,000	0.00%	Master of Comparative Law, School of Law, University of Iowa Attorney-at-law, Taiwan Associate General Counsel, TSMC Taiwan International Patent and Law Office (TIPLIO)	Director and/or Supervisor, TSMC subsidiaries	None	None	None
Vice President Human Resources Connie Ma	Female	R.O.C.	06/01/2014	80,000	0.00%	-	-	-	-	EMBA, International Business Management, National Taiwan University Director of Human Resources, TSMC Senior Vice President of Global Human Resources, Trend Micro Inc.	None	None	None	None
Vice President Research and Development/Technology Development Y.L. Wang	Male	R.O.C.	06/01/1992	218,535	0.00%	1,135,529	0.00%	-	-	Ph.D., Electrical Engineering, National Chiao Tung University, Taiwan Vice President, Fab 14B operations, TSMC Senior Director, Fab 14B operations, TSMC	None	None	None	None
Vice President Research and Development/Integrated Interconnect & Packaging Douglas Yu (Note 3)	Male	R.O.C.	12/28/1994	225,000	0.00%	-	-	-	-	PhD, Materials Engineering, Georgia Institute of Technology, U.S. Senior Director of Integrated Interconnect & Packaging Division in R&D, TSMC	None	None	None	None
Vice President Research and Development/More-than-Moore Technologies Alexander Kalnitsky (Note 3)	Male	U.S.A.	06/15/2009	-	-	-	-	-	-	PhD, Electrical Engineering, Carleton University, Canada Senior Director of More-than-Moore Technologies Division in R&D, TSMC	None	None	None	None
Vice President Research and Development/Design and Technology Platform Kevin Zhang (Note 3)	Male	U.S.A.	11/01/2016	-	-	-	-	-	-	PhD, Electrical Engineering, Duke University, U.S. Vice President, Technology and Manufacturing Group, Intel Corp.	None	None	None	None

Note 1: On-board date means the official date joining TSMC.

Note 2: Mr. Y.P. Chin and Dr. Y.J. Mii were promoted to Senior Vice President, effective November 8, 2016.

Note 3: Dr. Douglas Yu, Dr. Alexander Kalnitsky and Dr. Kevin Zhang were promoted to Vice President, effective November 8, 2016.

## 2.5.2 Compensation Paid to President & Co-CEO and Vice Presidents (Note 1)

Unit: NT\$ thousands

Title	Name	Salary (A)		Severance Pay and Pensions (B) (Note 4)		Bonuses and Allowances (C) (Note 5)		Employees' Profit Sharing Bonus (D)				Total Compensation (A+B+C+D) as a % of 2016 Net Income (Note 6)		Compensation Received from Non-consolidated Affiliates
		From TSMC	From All Consolidated Entities	From TSMC	From All Consolidated Entities	From TSMC	From All Consolidated Entities	From TSMC		From All Consolidated Entities		From TSMC	From All Consolidated Entities	
								Cash	Stock (Fair Market Value)	Cash	Stock (Fair Market Value)			
President and Co-Chief Executive Officer	Mark Liu	8,118	8,118	252	252	103,709	103,709	101,588	-	101,588	--	0.064%	0.064%	-
President and Co-Chief Executive Officer	C.C. Wei	8,118	8,118	252	252	104,152	104,152	101,588	-	101,588	-	0.064%	0.064%	-
Senior Vice President, Chief Financial Officer and Spokesperson Finance	Lora Ho	5,222	5,222	162	162	49,118	49,118	47,318	-	47,318	-	0.030%	0.030%	-
Senior Vice President and Chief Information Officer Information Technology, Materials Management and Risk Management	Stephen T. Tso													
Senior Vice President Research and Development/ Technology Development	Wei-Jen Lo													
Senior Vice President of TSMC and President of TSMC North America	Rick Cassidy													
Senior Vice President Operations/Product Development	Y.P. Chin (Note 2)													
Senior Vice President Research and Development/ Technology Development	Y.J. Mii (Note 2)													
Vice President Operations/Affiliate Fabs	M.C. Tzeng													
Vice President and Chief Technology Officer Research and Development/Corporate Research	Jack Sun													
Vice President Quality and Reliability	N.S. Tsai													
Vice President Operations/Mainstream Fabs and Manufacturing Technology	J.K. Lin													
Vice President Operations/300mm Fabs	J.K. Wang	65,452	79,631	2,025	2,400	475,796	558,934	433,178	-	433,178	-	0.293%	0.322%	122
Vice President Corporate Planning Organization	Irene Sun													
Vice President Research and Development/Design and Technology Platform	Cliff Hou													
Vice President Business Development	Been-Jon Woo													
Vice President and General Counsel Legal	Sylvia Fang													
Vice President Human Resources	Connie Ma													
Vice President Research and Development/Technology Development	Y.L. Wang													
Vice President Research and Development/Integrated Interconnect & Packaging	Douglas Yu (Note 3)													
Vice President Research and Development/More-than-Moore Technologies	Alexander Kalnitsky (Note 3)													
Vice President Research and Development/Design and Technology Platform	Kevin Zhang (Note 3)													
Total		86,910	101,089	2,691	3,066	732,775	815,913	683,672	-	683,672	-	0.451%	0.480%	122

Note 1: Compensation policy, standards/packages, procedures, the linkage to operating performance and future risk exposure: The total compensation paid to Chief Executive Officer, Chief Financial Officer and General Counsel is proposed by Chairman based on their job responsibility, contribution, company performance and projected future risks the Company will face. The total compensation paid to other executive officers is proposed by Chairman and Chief Executive Officer. The proposals are reviewed by the Compensation Committee before submitted to the Board of Directors for final approval.

Note 2: Mr. Y.P. Chin and Dr. Y.J. Mii were promoted to Senior Vice President, effective November 8, 2016.

Note 3: Dr. Douglas Yu, Dr. Alexander Kalnitsky and Dr. Kevin Zhang were promoted to Vice President, effective November 8, 2016.

Note 4: Pensions funded/paid according to applicable law.

Note 5: The above-mentioned figures include the expense for the employees' cash bonuses distributed in May, August, November 2016 and February 2017, Company cars and gasoline reimbursement, but does not include compensation paid to Company drivers (totaled NT\$3,432 thousand).

Note 6: Total compensation of TSMC and all consolidated entities paid to TSMC's Chief Executive Officer and Executive Officers in 2015 were NT\$1,406,547 thousand and NT\$1,491,529 thousand respectively, accounting for 0.46% and 0.49% of 2015 net income respectively.

## Compensation Paid to President & Co-CEO and Vice Presidents

	2016	
	From TSMC	From All Consolidated Entities and Non-consolidated Affiliates
NT\$0 ~ NT\$2,000,000	Rick Cassidy	None
NT\$2,000,000 ~ NT\$4,999,999	None	None
NT\$5,000,000 ~ NT\$9,999,999	Douglas Yu, Alexander Kalnitsky	Douglas Yu, Alexander Kalnitsky
NT\$10,000,000 ~ NT\$14,999,999	None	None
NT\$15,000,000 ~ NT\$29,999,999	Kevin Zhang	Kevin Zhang
NT\$30,000,000 ~ NT\$49,999,999	J.K. Wang, Irene Sun, Been-Jon Woo, Sylvia Fang, Connie Ma, Y. L. Wang	J.K. Wang, Irene Sun, Been-Jon Woo, Sylvia Fang, Connie Ma, Y. L. Wang
NT\$50,000,000 ~ NT\$99,999,999	Y.P. Chin, Y.J. Mii, M.C. Tzeng, Jack Sun, N.S. Tsai, J.K. Lin, Cliff Hou	Rick Cassidy, Y.P. Chin, Y.J. Mii, M.C. Tzeng, Jack Sun, N.S. Tsai, J.K. Lin, Cliff Hou
Over NT\$100,000,000	Mark Liu, C.C. Wei, Lora Ho, Stephen T. Tso, Wei-Jen Lo	Mark Liu, C.C. Wei, Lora Ho, Stephen T. Tso, Wei-Jen Lo
Total	22	22



### 2.5.3 Employees' Profit Sharing Bonus Paid to Management Team

Unit: NT\$ thousands

Title	Name	Stock (Fair Market Value)	Cash	Total Employees' Profit Sharing Bonus	Total Employees' Profit Sharing Bonus Paid to Management Team as a % of 2016 Net Income
President and Co-Chief Executive Officer	Mark Liu	-	101,588	101,588	0.030%
President and Co-Chief Executive Officer	C.C. Wei	-	101,588	101,588	0.030%
Senior Vice President, Chief Financial Officer and Spokesperson Finance	Lora Ho	-	47,318	47,318	0.014%
Senior Vice President and Chief Information Officer Information Technology, Materials Management and Risk Management	Stephen T. Tso				
Senior Vice President Research and Development/Technology Development	Wei-Jen Lo				
Senior Vice President of TSMC and President of TSMC North America	Rick Cassidy				
Senior Vice President Operations/Product Development	Y.P. Chin (Note 1)				
Senior Vice President Research and Development/Technology Development	Y.J. Mii (Note 1)				
Vice President Operations/Affiliate Fabs	M.C. Tzeng				
Vice President and Chief Technology Officer Research and Development/Corporate Research	Jack Sun				
Vice President Quality and Reliability	N.S. Tsai				
Vice President Operations/Mainstream Fabs and Manufacturing Technology	J.K. Lin				
Vice President Operations/300mm Fabs	J.K. Wang	-	433,178	433,178	0.130%
Vice President Corporate Planning Organization	Irene Sun				
Vice President Research and Development/Design and Technology Platform	Cliff Hou				
Vice President Business Development	Been-Jon Woo				
Vice President and General Counsel Legal	Sylvia Fang				
Vice President Human Resources	Connie Ma				
Vice President Research and Development/Technology Development	Y. L. Wang				
Vice President Research and Development/Integrated Interconnect & Packaging	Douglas Yu (Note 2)				
Vice President Research and Development/More-than-Moore Technologies	Alexander Kalnitsky (Note 2)				
Vice President Research and Development/Design and Technology Platform	Kevin Zhang (Note 2)				
Total		-	683,672	683,672	0.204%

Note 1: Mr. Y.P. Chin and Dr. Y.J. Mii were promoted to Senior Vice President, effective November 8, 2016.

Note 2: Dr. Douglas Yu, Dr. Alexander Kalnitsky and Dr. Kevin Zhang were promoted to Vice President, effective November 8, 2016.



# Global Top Corporate Governance

TSMC was one of 5 companies named by *IR Magazine* for Global Top Corporate Governance.





# Corporate Governance

## 3.1 Overview

TSMC advocates and acts upon the principles of operational transparency and respect for shareholder rights. We believe that the basis for successful corporate governance is a sound and effective Board of Directors. In line with this principle, the TSMC Board delegates various responsibilities and authority to two Board Committees, Audit Committee and Compensation Committee. Each Committee has a written charter approved by the Board. Each Committee's chairperson regularly reports to the Board on the activities and actions of the relevant committee. The Audit Committee and Compensation Committee consist solely of independent directors.

### 2016 Corporate Governance Awards

Organization	Awards
Dow Jones Sustainability Indices (DJSI)	Membership in the Dow Jones Sustainability World Index for the 16th consecutive year RobecoSAM Sustainability Award – Gold Class
MSCI Global Sustainability Indexes	Selected as MSCI Global Sustainability Indexes component
FTSE4Good Index	Selected as FTSE4Good Emerging Index component
FinanceAsia	"FinanceAsia" 20th Anniversary Platinum Awards: Best Company – in Taiwan
IR Magazine	Global Top Corporate Governance – Five Winning Companies
AsiaMoney	Best Managed Company Large Cap in Taiwan
FORTUNE	Selected as one of The World's Most Admired Companies
Barron's	Selected as Top 100 World's Most Respected Companies
CommonWealth Magazine	Excellence in Corporate Social Responsibility Award – Large cap – 2nd Place Most Admired Company in Taiwan for the 21st consecutive year Most admired entrepreneur in Taiwan
Taiwan Institute of Sustainable Energy	Taiwan Corporate Sustainability Awards: 2016 Taiwan Corporate Sustainability Awards No.1 for Domestic Corporates Taiwan Top 50 Corporate Responsibility Report Awards – Electronics Industry – Gold Class
Taiwan Stock Exchange	Ranked in top 5% in Corporate Governance Evaluation of Listed Companies for the 2nd consecutive year

## 3.2 Board of Directors

### Board Structure

TSMC's Board of Directors consists of eight distinguished members with a great breadth of experience as world-class business leaders or professionals. We rely on them for their diverse knowledge, personal perspectives, and solid business judgment. Five of the eight members are independent directors: former British Telecommunications Chief Executive Officer, Sir Peter Bonfield; Co-Founder, Chairman Emeritus of the Acer Group, Mr. Stan Shih; former Texas Instruments Inc. Chairman of the Board, Mr. Thomas J. Engibous; former Chairman of National Performing Arts Center and former Advisor of Executive Yuan, R.O.C., Ms. Kok-Choo Chen; and former Chairman of Applied Materials, Inc., Mr. Michael R. Splinter. One of the members of the Board Directors is female. The number of Independent Directors is more than 50% of the total number of Directors.

In February 2017, TSMC's Board of Directors determined the number of directors to be ten and approve the election of two additional directors at TSMC's 2017 Annual Shareholders' Meeting; and authorized the Chairman to nominate Dr. Mark Liu and Dr. C.C. Wei as candidates for directors to stand for election at TSMC's 2017 Annual Shareholders' Meeting.

### Board Responsibilities

Under the leadership of Chairman Morris Chang, TSMC's Board of Directors takes a serious and forthright approach to its duties and is a dedicated, competent and independent Board.

In the spirit of Chairman Chang's approach to corporate governance, a board of directors' primary duty is to supervise. The Board should supervise the Company's: compliance with relevant laws and regulations, financial transparency, timely disclosure of material information, and maintaining of the highest integrity within the Company. TSMC's Board of Directors strives to perform these responsibilities through the Audit Committee and the Compensation Committee, the hiring of a financial expert for the Audit Committee, and coordination with the Internal Audit department.

The second duty of the Board of Directors is to evaluate the management's performance and to appoint and dismiss officers of the Company when necessary. TSMC's management has maintained a healthy and functional communication with the Board of Directors, has been devoted in executing guidance of the Board, and is dedicated in running the business operations, all to achieve the best interests for TSMC shareholders.

The third duty of the Board of Directors is to resolve the important, concrete matters, such as capital appropriations, investment activities, dividends, etc.

The fourth duty of the Board of Directors is to provide guidance to the management team of the Company. Quarterly, TSMC's management reports to the Board on a variety of subjects. The management also reviews the Company's business strategies with the Board and updates TSMC's Board on the progress of those strategies, obtaining Board guidance as appropriate.

### Selection and Election of Directors

TSMC envisions the membership of its esteemed Board of Directors to be composed of highly ethical professionals with the necessary knowledge, experience and understanding from diverse backgrounds. TSMC envisions its Board to be composed of as many independent directors as possible, and the independence of each independent director candidate is also considered and assessed under relevant laws. Based on the above selection criteria, TSMC composes its Board with world-class candidates who are/were international or local business leaders in the high-tech industry, prestigious academics or other professionals excelling in their chosen field of expertise.

Directors shall be elected pursuant to the candidates nomination system as specified in Article 192-1 of the R.O.C. "Company Law". The tenure of office for Directors shall be three years. The independence of each independent director candidate is also considered and assessed under relevant law such as the Taiwan "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies". Under R.O.C. law, in which TSMC was incorporated, any shareholders holding one percent or more of our total outstanding common shares may nominate their own candidate to stand for election as a Board member. This democratic mechanism allows our shareholders to become involved in the selection and nomination process of Board candidates. The final slate of candidates are put to the shareholders for voting at the relevant annual shareholders' meeting.

There are no limits on the number of terms that a director may serve. We believe the Company benefits from the contributions of directors who have over their years of dedicated service acquired unique insights into the operations and financial developments of the Company. The Company reviews the appropriateness of each director's continued service to ensure there are new viewpoints available to the Board.

### Transition of Responsibilities

In November 2013, following nomination by Chairman Dr. Morris Chang and approval by the Board of Directors, Dr. Mark Liu and Dr. C.C. Wei assumed duties as Presidents and Co-Chief Executive Officers of TSMC, reporting directly to the Chairman. Demonstrating TSMC's steady and deliberate transition of responsibilities, the Board of Directors approved in April 2017 the nomination of Dr. Liu and Dr. Wei to serve as members of the Board, and they will stand for election to the Board at the TSMC Annual Shareholders' Meeting to be held in June 2017.

### Directors' Compensation

According to our Articles of Incorporation, not more than 0.3 percent of our annual profits (defined under local law) after recovering any losses incurred in prior years, if any, may be distributed as compensation to our directors. In addition, directors who also serve as executive officers of the Company are not entitled to receive any director compensation.

### Directors' Professional Qualifications and Independent Analysis

According to the relevant requirements set by Taiwan's Securities and Futures Bureau, the professional qualifications and independence status of the Company's Board members are listed in the table below.

Name	Criteria	Meet the Following Professional Qualification Requirements, Together with at Least Five Years Work Experience			Criteria (Note 1)										Number of Other Taiwanese Public Companies Concurrently Serving as an Independent Director
		An Instructor or Higher Position in a Department of Commerce, Law, Finance, Accounting, or Other Academic Department Related to the Business Needs of the Company in a Public or Private Junior College, College or University	A Judge, Public Prosecutor, Attorney, Certified Public Accountant, or Other Professional or Technical Specialists Who Has Passed a National Examination and Been Awarded a Certificate in a Profession Necessary for the Business of the Company	Have Work Experience in the Area of Commerce, Law, Finance, or Accounting, or Otherwise Necessary for the Business of the Company	1	2	3	4	5	6	7	8	9	10	
Morris Chang Chairman			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0
F.C. Tseng Vice Chairman			✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	1
Johnsee Lee Director	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	4
Sir Peter Leahy Bonfield Independent Director			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0
Stan Shih Independent Director			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0
Thomas J. Englibous Independent Director			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0
Kok-Choo Chen Independent Director	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0
Michael R. Splinter Independent Director			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0

Note:

Directors, during the two years before being elected and during the term of office, meet any of the following situations, please tick the appropriate corresponding boxes:

1. Not an employee of the company or any of its affiliates;
2. Not a director or supervisor of the company or any of its affiliates. The same does not apply, however, in cases where the person is an independent director of the company, its parent company, or any subsidiary, as appointed in accordance with the laws of Taiwan or with the laws of the country of the parent company or subsidiary;
3. Not a natural-person shareholder who holds shares, together with those held by the person's spouse, minor children, or held by the person under others' names, in an aggregate amount of one percent or more of the total number of issued shares of the company or ranks as one of its top ten shareholders;
4. Not a spouse, relative within the second degree of kinship, or lineal relative within the third degree of kinship, of any of the above persons in the preceding three subparagraphs;
5. Not a director, supervisor, or employee of a corporate/institutional shareholder that directly holds five percent or more of the total number of issued shares of the company or ranks as of its top five shareholders;
6. Not a director, supervisor, officer, or shareholder holding five percent or more of the shares of a specified company or institution that has a financial or business relationship with the company;
7. Not a professional individual who, or an owner, partner, director, supervisor, or officer of a sole proprietorship, partnership, company, or institution that, provides commercial, legal, financial, accounting services or consultation to the company or to any affiliate of the company, or a spouse thereof, provided that this restriction does not apply to any member of the compensation committee who exercises powers pursuant to Article 7 of the "Regulations Governing the Establishment and Exercise of Powers of Compensation Committees of Companies whose Stock is Listed on the TWSE or Traded on the GTSM";
8. Not having a marital relationship, or a relative within the second degree of kinship to any other director of the company;
9. Not been a person of any conditions defined in Article 30 of the Company Law; and
10. Not a governmental, juridical person or its representative as defined in Article 27 of the Company Law.

### 3.2.1 Audit Committee

The Audit Committee assists the Board in fulfilling its oversight of the quality and integrity of the accounting, auditing, reporting, and financial control practices of the Company.

The Audit Committee is responsible to review the following major matters:

- Financial reports;
- Auditing and accounting policies and procedures;
- Internal control systems and including related policies and procedures;
- Material asset or derivatives transactions;
- Material lending funds, endorsements or guarantees;
- Offering or issuance of any equity-type securities;
- Derivatives and cash investments;
- Legal compliance;
- Related-party transactions and potential conflicts of interests involving executive officers and directors;
- Ombudsman reports;
- Fraud prevention and investigation reports;
- IT security;
- Corporate risk management;
- Performance, independence, qualification of independent auditor;
- Hiring or dismissal of an attesting CPA, or the compensation given thereto;
- Appointment or discharge of financial, accounting, or internal auditing officers;
- Assessment of Committee Charter and fulfillment of Audit Committee duties; and
- Assessment of the Committee's performance, etc.

Under R.O.C. law, the membership of Audit Committee shall consist of all independent Directors. TSMC's Audit Committee satisfies this statutory requirement. The Committee also engaged a financial expert consultant in accordance with the rules of the U.S. Securities and Exchange Commission. The Audit Committee annually conducts self-evaluation to assess the Committee's performance and identify areas for further attention.

TSMC's Audit Committee is empowered by its Charter to conduct any study or investigation it deems appropriate to fulfill its responsibilities. It has direct access to TSMC's internal auditors, the Company's independent auditors, and all employees of the Company. The Committee is authorized to retain and oversee special legal, accounting, or other consultants as it deems appropriate to fulfill its mandate. The Audit Committee Charter is available on TSMC's corporate website.

### 3.2.2 Compensation Committee

The Compensation Committee assists the Board in discharging its responsibilities related to TSMC's compensation and benefits policies, plans and programs, and in the evaluation and compensation of TSMC's directors of the Board and executives.

The members of the Compensation Committee are appointed by the Board as required by R.O.C. law. According to TSMC's Compensation Committee Charter, the Committee shall consist of no fewer than three independent directors of the Board. Currently, the Compensation Committee is comprised of all five independent directors; the Chairman of the Board, Dr. Morris Chang, is invited by the Committee to attend all meetings and is excused from the Committee's discussion of his own compensation.

TSMC's Compensation Committee is authorized by its Charter to retain an independent consultant to assist in the evaluation of CEO, or executive officer compensation. The Compensation Committee Charter is available on TSMC's corporate website.

### Compensation Committee Members' Professional Qualifications and Independent Analysis

According to the relevant requirements set by Taiwan's Securities and Futures Bureau, the professional qualifications and independence status of the Company's Compensation Committee members are listed in the table below.

Name Title	Meet the Following Professional Qualification Requirements, Together with at Least Five Years Work Experience			Criteria (Note 1)								Number of Other Taiwanese Public Companies Concurrently Serving as a Compensation Committee Member in Taiwan
	An Instructor or Higher Position in a Department of Commerce, Law, Finance, Accounting, or Other Academic Department Related to the Business Needs of the Company in a Public or Private Junior College, College or University	A Judge, Public Prosecutor, Attorney, Certified Public Accountant, or Other Professional or Technical Specialist Who Has Passed a National Examination and Been Awarded a Certificate in a Profession Necessary for the Business of the Company	Have Work Experience in the Area of Commerce, Law, Finance, or Accounting, or Otherwise Necessary for the Business of the Company	1	2	3	4	5	6	7	8	
Stan Shih Independent Director			✓	✓	✓	✓	✓	✓	✓	✓	✓	-
Sir Peter Leahy Bonfield Independent Director			✓	✓	✓	✓	✓	✓	✓	✓	✓	-
Thomas J. Engibous Independent Director			✓	✓	✓	✓	✓	✓	✓	✓	✓	-
Kok-Choo Chen Independent Director	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-
Michael R. Splinter Independent Director			✓	✓	✓	✓	✓	✓	✓	✓	✓	-

Note:

Compensation Committee Members, during the two years before being elected or during the term of office, meet any of the following situations, please tick the appropriate corresponding boxes:

- Not an employee of the company or any of its affiliates;
- Not a director or supervisor of the company or any of its affiliates. The same does not apply, however, in cases where the person is an independent director of the company, its parent company, or any subsidiary, as appointed in accordance with the laws of Taiwan or with the laws of the country of the parent company or subsidiary;
- Not a natural-person shareholder who holds shares, together with those held by the person's spouse, minor children, or held by the person under others' names, in an aggregate amount of one percent or more of the total number of issued shares of the company or ranks as one of its top ten shareholders;
- Not a spouse, relative within the second degree of kinship, or lineal relative within the third degree of kinship, of any of the above persons in the preceding three subparagraphs;
- Not a director, supervisor, or employee of a corporate/institutional shareholder that directly holds five percent or more of the total number of issued shares of the company or ranks as of its top five shareholders;
- Not a director, supervisor, officer, or shareholder holding five percent or more of the shares of a specified company or institution that has a financial or business relationship with the company;
- Not a professional individual who, or an owner, partner, director, supervisor, or officer of a sole proprietorship, partnership, company, or institution that, provides commercial, legal, financial, accounting services or consultation to the company or to any affiliate of the company, or a spouse thereof;
- Not been a person of any conditions defined in Article 30 of the Company Law.

### 3.2.3 Director and Committees Members' Attendance

Each Director is expected to attend every Board meeting and the committees meeting on which he or she serves. In 2016, the average Board Meeting attendance rate was 90.63% and the attendance rate for the Audit Committee and Compensation Committee's Meetings were 92% and 90% respectively.

#### Board of Directors Meeting Status

Dr. Morris Chang, the Chairman of the Board of Directors, convened four regular meetings in 2016. The directors' attendance status is as follows.

Title	Name	Attendance in Person	By Proxy	Attendance Rate in Person (%)	Notes
Chairman	Morris Chang	4	-	100%	None
Vice Chairman	F.C. Tseng	4	-	100%	None
Director	National Development Fund, Executive Yuan Representative: Johnsee Lee	3	1	75%	None
Independent Director	Sir Peter Leahy Bonfield	4	-	100%	None
Independent Director	Stan Shih	4	-	100%	None
Independent Director	Thomas J. Engibous	3	1	75%	None
Independent Director	Kok-Choo Chen	4	-	100%	None
Independent Director	Michael R. Splinter	3	1	75%	None

Annotations:

A. (1) Securities and Exchange Act §14-3 resolutions:

Meeting Dates	Resolution	Any Independent Director Had a Dissenting Opinion or Qualified Opinion
2016 1st Regular Meeting February 1 & 2	approving the establishment of a wholly owned subsidiary in Nanjing of China with capital injection not exceeding US\$1 billion, subject to approval from the Investment Commission of Taiwan's Ministry of Economic Affairs, to set up a 12-inch fab and a design service center with a total capital investment not to exceed US\$3 billion	None
2016 2nd Regular Meeting May 9 & 10	approving amendments to TSMC's internal control related policies and procedures	
2016 4th Regular Meeting November 7 & 8	approving the proposed 2017 service fees and out-of-pocket expenses for Deloitte & Touche, TSMC's independent auditor	
2017 1st Regular Meeting February 13 & 14	approving amendments to TSMC's "Procedures for Acquisition or Disposal of Assets"	

(2) There were no other written or otherwise recorded resolutions on which an independent director had a dissenting opinion or qualified opinion in 2016.

B. Recusals of Directors due to conflicts of interests in 2016: Directors recused themselves from the discussion and voting of their compensation resolution.

C. Measures taken to strengthen the functionality of the Board:

- Five of the eight Directors are Independent Directors. The number of Independent Directors is more than 50% of the total number of Directors; the Chairman and Vice Chairman of the Board of Directors are not executive officers of the Company.
- TSMC Board delegates various responsibilities and authority to two Board Committees, Audit Committee and Compensation Committee. Both the two Committees consist solely of the five Independent Directors. Each Committees chairperson regularly reports to the Board on the activities and actions of the relevant committee.

#### Audit Committee Meeting Status

Sir Peter Bonfield, Chairman of the Audit Committee, convened four regular meetings and one special meeting in 2016. The Committee members and consultant's attendance status is shown in the following table. In addition to these meetings, the Committee members and consultant participated in four telephone conferences to discuss the Company's Annual Report to be filed with the Taiwan and U.S. authorities and investor conference materials with management.



Title	Name	Attendance in Person	By Proxy	Attendance Rate in Person (%)	Telephone Conferences	Attendance Rate of Telephone Conferences (%)	Notes
Chair	Sir Peter Leahy Bonfield	5	-	100%	4	100%	None
Member	Stan Shih	5	-	100%	4	100%	None
Member	Thomas J. Engibous	4	1	80%	4	100%	None
Member	Kok-Choo Chen	5	-	100%	4	100%	None
Member	Michael R. Splinter	4	1	80%	4	100%	None
Financial Expert	J.C. Lobbezoo	5	-	100%	4	100%	None

Annotations:

A. (1) Resolutions related to Securities and Exchange Act §14-5:

Meeting Dates	Resolution	Any Independent Director had a Dissenting Opinion or Qualified Opinion
2016 1st Regular Meeting February 1	approving the 2015 annual financial statements approving 2015 Statement of Internal Control System	None
2016 2nd Regular Meeting May 9	approving the proposed 2016 service fees to Deloitte & Touche for Nanjing fab approving amendments to TSMC's internal control related policies and procedures	
2016 3rd Regular Meeting August 1	approving the 2016 second quarter financial statements	
2016 4th Regular Meeting November 7	approving the proposed 2017 service fees and out-of-pocket expenses for Deloitte & Touche approving the permitted non-audit services to be performed by Deloitte & Touche	
2017 1st Regular Meeting February 13	approving the 2016 annual financial statements approving the amendments to TSMC's "Procedures for Acquisition or Disposal of Assets" approving 2016 Statement of Internal Control System	

(2) There was no other resolutions which was not approved by the Audit Committee but was approved by two thirds or more of all directors in 2016.

B. There were no recusals of independent directors due to conflicts of interests in 2016.

C. Descriptions of the communications between the independent directors, the internal auditors, and the independent auditors in 2016 (which should include the material items, channels, and results of the audits on the corporate finance and/or operations, etc.):

(1) The internal auditors have sent the audit reports to the members of the Audit Committee periodically, and presented the findings of all audit reports in the quarterly meetings of the Audit Committee. The head of Internal Audit will immediately report to the members of the Audit Committee any material matters. During 2016, the head of Internal Audit did not report any such material matters. The communication channel between the Audit Committee and the internal auditor functioned well.

(2) The Company's independent auditors have presented the findings of their quarterly review or audits on the Company's financial results. Under applicable laws and regulations, the independent auditors are also required to immediately communicate to the Audit Committee any material matters that they have discovered. During 2016, the Company's independent auditors did not report any irregularity. The communication channel between the Audit Committee and the independent auditors functioned well.

The communications between the independent directors, the internal auditors, and the independent auditors are listed in the table below.

Meeting Dates	Communications between the Independent Directors and the Internal Auditors	Communications between the Independent Directors and the Independent Auditors
2016 1st Regular Meeting February 1	<ul style="list-style-type: none"> <li>reviewing report on SOX 404 self-testing results for the year 2015</li> <li>reviewing the Internal Auditor's report (closed door)</li> <li>reviewing and approving 2015 Statement of Internal Control System</li> </ul>	<ul style="list-style-type: none"> <li>reviewing any audit problems or difficulties and management's response in connection with 2015 annual financial statements (closed door)</li> <li>reviewing regulatory developments</li> <li>reviewing external auditor relationship (i.e. qualification, performance and independence)</li> </ul>
2016 2nd Regular Meeting May 9	<ul style="list-style-type: none"> <li>reviewing the Internal Auditor's report (closed door)</li> <li>reviewing and approving amendments to TSMC's internal control related policies and procedures</li> </ul>	<ul style="list-style-type: none"> <li>reviewing any review problems or difficulties and management's response in connection with 2016 first quarter financial statements (closed door)</li> <li>reviewing regulatory developments</li> <li>reviewing the result of CPA evaluation questionnaire</li> </ul>
2016 3rd Regular Meeting August 1	<ul style="list-style-type: none"> <li>reviewing the Internal Auditor's report (closed door)</li> </ul>	<ul style="list-style-type: none"> <li>reviewing any review problems or difficulties and management's response in connection with 2016 second quarter financial statements (closed door)</li> <li>reviewing regulatory developments</li> </ul>
2016 4th Regular Meeting November 7	<ul style="list-style-type: none"> <li>reviewing the Internal Auditor's report (closed door)</li> <li>reviewing and approving the 2017 internal audit plan</li> </ul>	<ul style="list-style-type: none"> <li>reviewing any review problems or difficulties and management's response in connection with 2016 third quarter financial statements (closed door)</li> <li>reviewing regulatory developments</li> </ul>
2017 1st Regular Meeting February 13	<ul style="list-style-type: none"> <li>reviewing the Internal Auditor's report (closed door)</li> <li>reviewing report on SOX 404 self-testing results for the year 2016</li> <li>reviewing and approving 2016 Statement of Internal Control System</li> </ul>	<ul style="list-style-type: none"> <li>reviewing any audit problems or difficulties and management's response in connection with 2016 annual financial statements (closed door)</li> <li>reviewing regulatory developments</li> </ul>

Result: all of above matters were reviewed and approved by the Audit Committee whereupon independent directors raised no objection.

### Compensation Committee Meeting Status

Mr. Stan Shih, Chairman of the Compensation Committee, convened four regular meetings in 2016. The Committee members' attendance status is as follows:

Title	Name	Attendance in Person	By Proxy	Attendance Rate in Person (%)	Notes
Chair	Stan Shih	4	-	100%	None
Member	Sir Peter Leahy Bonfield	4	-	100%	None
Member	Thomas J. Engibous	3	1	75%	None
Member	Kok-Choo Chen	4	-	100%	None
Member	Michael R. Splinter	3	1	75%	None

Annotations:

- There was no recommendation of the Compensation Committee which was not adopted or was modified by the Board of Directors in 2016.

- There were no written or otherwise recorded resolutions on which a member of the Compensation Committee had a dissenting opinion or qualified opinion.

### 3.3 Major Decisions of Shareholders' Meeting and Board Meetings

#### 3.3.1 Major Resolutions of Shareholders' Meeting and Implementation Status

TSMC's 2016 Annual Shareholders' Meeting was held in Hsinchu, Taiwan on June 7, 2016. At the meeting, shareholders present in person or by proxy approved the following resolutions:

- (1) The revisions to the Articles of Incorporation;
- (2) The 2015 Business Report and Financial Statements; and
- (3) The distribution of 2015 profits.

#### Implementation Status

All the resolutions of the Shareholders' Meeting have been fully implemented in accordance with the resolutions.

#### 3.3.2 Major Resolutions of Board Meetings

During the 2016 calendar year, and as of the date of this Annual Report, major resolutions approved at Board meetings are summarized below:

- (1) Board Meeting of February 1 & 2, 2016:
  - approving 2015 business report and financial statements;
  - approving distribution of 2015 profits, and cash dividends, employee cash bonus and employee profit sharing;
  - approving the establishment of a wholly owned subsidiary in Nanjing of China with capital injection not exceeding US\$1 billion, subject to approval from the Investment Commission of Taiwan's Ministry of Economic Affairs, to set up a 12-inch fab and a design service center with a total capital investment not to exceed US\$3 billion;
  - approving capital appropriations of US\$2,536.9 million (including: 1. installation of advanced technology capacity; 2. second quarter 2016 R&D capital investments and sustaining capital expenditures);
  - approving the capital injection of not more than US\$2 billion to TSMC Global Ltd., a wholly-owned BVI

subsidiary, for the purpose of reducing foreign exchange hedging costs; and

- convening the 2016 Annual Shareholders' Meeting.
- (2) Regular Board Meeting of May 9 & 10, 2016:
    - approving capital appropriations of US\$4,101.3 million (including: 1. installation and expansion of advanced technology capacity; 2. conversion of certain logic capacity to specialty technology; 3. third quarter 2016 R&D capital investments and sustaining capital expenditures).
  - (3) Regular Board Meeting of August 1 & 2, 2016:
    - approving capital appropriations of US\$3,790.4 million (including: 1. expansion of advanced technology capacity; 2. conversion of certain logic capacity to specialty technologies; 3. fourth quarter 2016 R&D capital investments and sustaining capital expenditures); and
    - approving TSMC's acquisition from VisEra Holding Company of 86.9% shareholding in VisEra Technologies Company Ltd. at the book value, and 6.9% shareholding in Xintec Inc. at the market price to simplify investment structure. As a result, VisEra Holding Company will be dissolved and merged into TSMC Partners, Ltd., which is 100% owned by TSMC. After the transaction, TSMC will own 86.9% of VisEra Technologies Company Ltd. and 41.3% of Xintec Inc. directly, which are the same as what TSMC has held directly and indirectly prior to this transaction.
  - (4) Regular Board Meeting of November 7 & 8, 2016:
    - approving capital appropriations of US\$4,908.9 million (including: 1. installation and expansion of advanced technology capacity; 2. upgrading advanced packaging capacity to next generation technology; 3. first quarter 2017 R&D capital investments and sustaining capital expenditures);
    - approving the promotion of Mr. Y.P. Chin as Senior Vice President;
    - approving the promotion of Dr. Y.J. Mii as Senior Vice President;
    - approving the promotion of Dr. Douglas Yu as Vice President;
    - approving the promotion of Dr. Alexander Kalnitsky as Vice President; and
    - approving the appointment of Dr. Kevin Zhang as Vice President.
  - (5) Board Meeting of February 13 & 14, 2017:
    - approving 2016 business report and financial statements;
    - approving distribution of 2016 profits, and cash dividends, employee cash bonus and employee profit sharing;
    - approving capital appropriations of US\$1,927.58 million (including: 1. upgrading advanced technology capacity and expanding advanced packaging capacity; 2.

conversion of logic capacity to specialty technology; 3. upgrading and building specialty technology capacity; 4. second quarter 2017 R&D capital investments and sustaining capital expenditures);

- approving the capital injection of not more than US\$2 billion to TSMC Global Ltd., a wholly-owned BVI subsidiary, for the purpose of reducing foreign exchange hedging costs;
- determining the number of directors to be increased by two to ten and approving the election of two additional directors at TSMC's 2017 Annual Shareholders' Meeting, and authorizing the Chairman to nominate Dr. Mark Liu and Dr. C.C. Wei as candidates for directors to stand for election at TSMC's 2017 Annual Shareholders' Meeting; and
- convening the 2017 Annual Shareholders' Meeting.

### 3.3.3 Major Issues of Record or Written Statements Made by Any Director Dissenting to Important Resolutions Passed by the Board of Directors during the 2016 Calendar Year and as of the Date of this Annual Report: None.

### 3.4 Taiwan Corporate Governance Implementation as Required by Taiwan Financial Supervisory Commission

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Explanation	
1. Does Company follow "Taiwan Corporate Governance Implementation" to establish and disclose its corporate governance practices?		V	TSMC has always followed excellent corporate governance practices, provided the utmost in operational transparency and safeguarded shareholders' equity. Although the Company does not have a formal code of practice for corporate governance, however TSMC has always been highly regarded as the industry leader in implementing comprehensive corporate governance practices. In addition, the Company also has a world-class Board of Directors. The Company believes that corporate governance is based on integrity, professional management and implementation. TSMC has been proving its excellent corporate governance in its operating performance and continued winning of domestic and international awards on best corporate governance company.	Same as explanation
2. Shareholding Structure & Shareholders' Rights (1) Does Company have Internal Operation Procedures for handling shareholders' suggestions, concerns, disputes and litigation matters. If yes, has these procedures been implemented accordingly?  (2) Does Company possess a list of major shareholders and beneficial owners of these major shareholders?  (3) Has the Company built and executed a risk management system and "firewall" between the Company and its affiliates?  (4) Has the Company established internal rules prohibiting insider trading on undisclosed information?	V		(1) TSMC has designated appropriate departments, such as Corporate Communication Division, the SEC Compliance Department, Legal Department, etc., to handle shareholder suggestions, concerns, disputes or litigation matters.  (2) TSMC tracks the shareholdings of directors, officers, and top ten shareholders.  (3) TSMC has set up internal rules in the Company's Internal Control System and Affiliated Corporations Management.  (4) TSMC has established its "Insider Trading policy" that applies to all employees, officers and members of the Board of Directors of the Company and to any other person having a duty of trust or confidence, with respect to transactions in the Company's securities. This policy prohibits any insider trading and the Company regularly provides internal training on this issue.	None
3. Composition and Responsibilities of the Board of Directors (1) Has the Company established a diversification policy for the composition of its Board of Directors and has it been implemented accordingly?  (2) Other than the Compensation Committee and the Audit Committee which are required by law, does the Company plan to set up other Board committees?  (3) Has the Company established methodology for evaluating the performance of its Board of Directors, on an annual basis?  (4) Does the Company regularly evaluate its external auditors' independence?	V		(1) The members of TSMC Board of Directors are nominated via a rigorous selection process. It not only considers diverse backgrounds, professional competence and experience, but also attaches great importance to his/her personal reputation on ethics and leadership. Presently, the Company's Board of Directors consists of eight members who possesses world-class managerial and/or professional experiences. We rely on each directors' knowledge, personal insight and business judgment. One female director currently sits on the Board of Director, and a majority of our Board consists of independent directors.  (2) Audit Committee (founded in 2002): consists of all five independent directors; Compensation Committee (founded in 2003): consists of all five independent directors; CSR Committee (founded in 2011): is formed by the Company's management team and reports to the Board of Directors.  (3) As TSMC's corporate governance concept, the Board of Director's primary responsibility is to supervise, evaluate the management's performance and dismiss officers of the Company when necessary, resolve the important, concrete matters and provide guidance to the management team. TSMC's Board of Directors consists of distinguished members with a great breadth of experience as world-class business leaders or professionals and adhere high ethical standards and commitment to the Company. Each quarter's Board Meeting is last for two days. Company's resolutions are determined in board meeting, also business strategy and future orientation are discussed in the meeting, in order to create best interest for shareholders. Based on TSMC's operating performance and local/international awards of best corporate governance, it certainly proves the Company's excellent performance of Board of Directors. Also, TSMC's audit committee performs self-evaluation and discusses future issues of concern by questionnaire on annual basis.  (4) The Audit Committee annually evaluates the independence of external auditors and reports the same to the Board of Directors.	None

(Continued)

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Explanation	
4. Does the Company established a full- (or part-) time corporate governance unit or personnel to be in charge of corporate governance affairs (including but not limited to furnish information required for business execution by directors, handle matters relating to board meetings and shareholders' meetings according to laws, handle corporate registration and amendment registration, produce (or record?) minutes of board meetings and shareholders meetings, etc.	V		The Chairman appointed the current General Counsel as the Company's Board secretariat. TSMC's Corporate & Compliance Legal Division, which directly reports to the General Counsel, is in charge of assisting in related affairs, including furnishing information required for business decisions by Directors, handling matters relating to Board meetings, Committees meetings and Shareholders' meetings and recording minutes of relevant meetings, etc. The SEC Compliance Department is responsible for handling corporate registration and amendment registration. All application documents needs to be reviewed by Legal and approved by the General Counsel.	None
5. Has the Company established a means of communicating with its Stakeholders (including but not limited to shareholders, employees, customers, suppliers, etc.) or created a Stakeholders Section on its Company website? Does the Company respond to stakeholders' questions on corporate responsibilities?	V		Depending on the situation, the Company's Corporate Communication Division, SEC Compliance department, Human Resources department, Customer Service department and Procurement department will communicate with stakeholders. We also have publicly disclosed the contact information of our corporate spokesperson and relevant departments. Also, we have a stakeholder section on our corporate website to address our corporate social responsibilities and any other issues. For details, please refer to "7. Corporate Social Responsibility" on page 118-133 of this Annual Report and "2. Stakeholder Engagement" of TSMC's CSR Report.	None
6. Has the Company appointed a professional registrar for its Shareholders' Meetings?	V		We have appointed China Trust as our registrar for our Shareholders' Meetings.	None
7. Information Disclosure (1) Has the Company established a corporate website to disclose information regarding its financials, business and corporate governance status?  (2) Does the Company use other information disclosure channels (e.g. maintaining an English-language website, designating staff to handle information collection and disclosure, appointing spokespersons, webcasting investors conference etc.)?	V		We have appointed China Trust as our registrar for our Shareholders' Meetings. (1) TSMC discloses its financials business and corporate governance status on its website at <a href="http://www.tsmc.com">http://www.tsmc.com</a> (in Chinese and English). TSMC's American Depositary Receipt (ADR) is listed on the New York Stock Exchange (NYSE). As a foreign issuer, TSMC must comply with NYSE's rules. We have been operating in accordance with NYSE listing standards, and have been disclosing the major differences between our corporate governance practices and U.S. corporate governance practices. Please see <a href="http://www.tsmc.com/download/english/e03_governance/NYSE_Section_303A.pdf">http://www.tsmc.com/download/english/e03_governance/NYSE_Section_303A.pdf</a>  (2) TSMC has designated appropriate departments (e.g. the Corporate Communication Division, the SEC Compliance Department, etc.) to handle the collection and disclosure of information as required by the relevant laws and regulations of Taiwan and other jurisdictions. TSMC has designated spokespersons as required by relevant regulations. TSMC webcasts live investor conferences.	None
8. Has the Company disclosed other information to facilitate a better understanding of its corporate governance practices (e.g. including but not limited to employee rights, employee wellness, investor relations, supplier relations, rights of stakeholders, directors' training records, the implementation of risk management policies and risk evaluation measures, the implementation of customer relations policies, and purchasing insurance for directors)?	V		(1) For employee rights and employee wellness, please refer to "Human Capital" of this Annual Report.  (2) For investor relations, supplier relations and rights of stakeholders, please refer to "Corporate Social Responsibility" of this Annual Report.  (3) For Directors' training records, please refer to "Continuing Education/Training of Directors" of this Annual Report.  (4) For Risk Management Policies and Risk Evaluation, please refer to "Risk Management" of this Annual Report.  (5) For Customer Relations Policies, please refer to "Customer Trust" of this Annual Report.  (6) TSMC maintains D&O Insurance for its directors and officers.	None
9. The improvement status for the result of Corporate Governance Evaluation announced by Taiwan Stock Exchange			TSMC was ranked in top 5% in Corporate Governance Evaluation in 2015 and 2016. The implementation status regarding below two non-scoring items: 1. Establishment a formal code of practice for corporate governance: as the explanation of Assessment Item 1 of this table, although the Company does not have a formal code of practice for corporate governance, however TSMC has always been highly regarded as the industry leader in implementing comprehensive corporate governance practices. In addition, the Company also has a world-class Board of Directors. The Company believes that corporate governance is based on integrity, professional management and implementation. TSMC has been proving its excellent corporate governance in its operating performance and continued winning of domestic and international awards on best corporate governance company. 2. Training of Directors: TSMC's Board of Directors consists of distinguished members with a great breadth of experience as world-class business leaders or professionals. The Company continually arranges relevant training for Directors during Board meetings, and Directors also participate relevant course as needed. For the details, please refer to the below table "Continuing Education/Training of Directors in 2016".	

### Continuing Education/Training of Directors in 2016

The major training methods of Directors includes:

- At quarter Board meetings, TSMC management regularly presents updates on the Company's business, regulatory developments and other information to Directors;
- The Company arranges speeches regarding politics, economics, and regulatory compliance, etc.;
- At quarter Audit Committee meetings, regular regulatory update reports are provided by TSMC's General Counsel and by the Company's independent auditors; and
- Directors participate relevant training courses as needed.

In addition, from time to time, Directors are invited by other parties to give speeches on corporate governance and related topics.

Name	Date	Host by	Training/Speech Title	Duration
Morris Chang	07/01	Pan Wen-Yuan Cultural and Educational Foundation	Speech: New Talent of a New Era	1 hour
	10/29	Fubon Financial Holding Co., Ltd.	Speech: Corporate Governance Structure and Board Operations	2 hours
F.C. Tseng	05/05	Securities and Future Institute	Legal Liability of Directors and Supervisors in Hostile Mergers and Acquisitions	3 hours
	08/04		Case Study on Employee Compensation Strategies and Tool Applications	3 hours
Stan Shih	11/10	Taiwan Corporate Governance Association	Introduction to Significant Mergers and Acquisition Agreements (Including Case Sharing)	3 hours
	11/11		Industrial Sustainable Development - ICT Industry's Low Carbon Investments and Business Strategies in Response to the Paris Agreement	3 hours
Johnsee Lee	08/12	Taiwan Corporate Governance Association	Audit Committee Practices	3 hours
	09/21	Taiwan Mergers & Acquisitions and Private Equity Council	2016 Private Equity Forum	4 hours
	09/29	Oxford Economics	Global Economic Outlook Seminar	3 hours
Michael R. Splinter	10/09	Community College Entrepreneurial Association	Developing Entrepreneurs	2 hours
Morris Chang F.C. Tseng Sir Peter Leahy Bonfield Stan Shih Thomas J. Engibous Kok-Choo Chen Michael R. Splinter Johnsee Lee	02/02	TSMC	"Post-Election Taiwan and its Relations with China and the US" by Dr. Chi SU, Chairman of Taipei Forum	40 mins.
	08/02	TSMC	"Recent Labor Problems in Taiwan and Future Potential Impact" by Dr. Pan Shihwei, Associate Professor of Industrial Relations of Department and graduate studies of Labor Relations, Chinese Culture University	1 hour

Note: Selected speeches on corporate governance and related topics.

### Continuing Education/Training of Management in 2016

Name/Title	Date	Host by	Training	Duration
Lora Ho Senior Vice President and Chief Financial Officer	05/05	Securities and Future Institute	Legal Liability of Directors and Supervisors in Hostile Mergers and Acquisitions	3 hours
	08/04		Case Study on Employee Compensation Strategies and Tool Applications	3 hours
Sylvia Fang Vice President and General Counsel	05/26	Wispro IP & Legal	Sensing the Future Forum Speech: Sensing the Future	3.5 hours
	09/21	Intellectual Property Office, Ministry of Economic Affairs	Taiwan-EU Seminar on Trade Secrets Speech: Challenges Facing Taiwan Companies Protecting Corporate Trade Secrets	8 hours
	11/15	Ministry of Economic Affairs	Trade Secrets Legislation's Impact on Industry Speech: The Status and Predicament of Trade Secrets Protection by Taiwanese Enterprises	3.5 hours
	12/09	Baker McKenzie	2016 Global Patent Seminar Speech: Development & Challenges of Trade Secret Protection in Taiwan	3.5 hours
Cliff Hou Vice President, Design and Technology Platform	05/05	Securities and Future Institute	Legal Liability of Directors and Supervisors Arising in Hostile Mergers and Acquisitions	3 hours
	12/02		Professional Director's Insight into Corporate Governance and Building/Forming Effective Board of Directors	3 hours
Jessica Chou Senior Director, Accounting Division	12/05	Accounting Research and Development Foundation	The Annual Professional Development Training for Principal Accounting Officer	6 hours
	12/06			6 hours
John Liang Director, Internal Audit	05/11	Computer Audit Association	Case Sharing of Procurement Auditing	6 hours
	11/29	Securities and Future Institute	Fraud Risks in Operation Cycles	6 hours

In addition, various training programs and speech presentations were also provided by TSMC's Legal Organization for Management and the relevant divisions, such as:

- Ethics code and anti-bribery/corruption
- Intellectual Property Protection
- Export Control Compliance and Practice

### 3.5 Code of Ethics and Business Conduct

#### Ethics at TSMC

Code of Conduct: Integrity is the most important core value of TSMC's culture. TSMC is committed to acting ethically in all aspects of our business; constantly and vigilantly promoting integrity, honesty, fairness, accuracy, and transparency in all that we say and do. At the heart of our corporate governance culture is TSMC's Code of Ethics and Business Conduct (the "Code") that applies to TSMC and its subsidiaries. The Code requires that each employee bears a heavy personal responsibility to preserve and to protect TSMC's ethical values and reputation and to comply with various applicable laws and regulations.

#### Major Ethics Code Obligations

- Do not advance personal interests at the expense of or in conflict with the Company;
- Refrain from corruption, unfair competition, fraud, collusion, and waste or abuse of corporate assets;
- Avoid any efforts improperly to influence the decisions of anyone, including government officials, agencies, and courts, as well as our customers and suppliers.
- Do not undertake any practices detrimental to TSMC, to the environment, or to society;
- Procure all of our raw materials from socially responsible sources;
- Protect proprietary information of TSMC and our customers; and
- Abide by both the letter and spirit of all applicable laws, rules and regulations.

Intellectual Property Protection: In order to build and sustain an environment of innovation, technology leadership, and sustainable profitable growth, the Code requires that we promote business relationships founded upon an unwavering respect for the intellectual property rights, proprietary information and trade secrets of TSMC, our customers, and others.

Public Disclosures: TSMC's officers, especially our CEO, CFO, and General Counsel, with oversight from our Board, are responsible for the full, fair, accurate, timely, and understandable financial accounting and financial disclosure in reports and documents filed by the Company with securities authorities and in all TSMC public communications and disclosures. TSMC has a variety of measures in place to ensure compliance with these disclosure obligations.

Any modification to the Code requires the approval of our Audit Committee to ensure our ethics compliance program is independently reviewed against corporate best practices.

#### Code Implementation

High Standard Ethical Culture: Our ethics program is implemented in four ways by all of our employees, officers and Board members. First, TSMC's management sets the "tone from the top" by acting in accordance with the Code so that they may be an example to all stakeholders. Second, working-level managers are responsible for ensuring their staff's understanding of and compliance with applicable rules and regulations. Third, we encourage an environment of open communications in discussing any questions related to the Code. Any employee may consult his or her direct supervisors, Human Resources or Legal to obtain timely advice. Lastly, TSMC requires all employees to stay vigilant and report any noncompliance by anyone to their supervisors, the function head of Human Resources, the responsible corporate Vice President that oversees the Ombudsman system, or to the Chairman of the Company's Audit Committee directly.

#### Self-Assessment of All Departments and Employees:

Self-assessment of all departments and employees is an important part of our ethics compliance program. All departments and subsidiaries of TSMC are required to conduct Control Self-Assessment (CSA) tests annually to review employees' awareness of the Code. The CSA results are reviewed to track the results of our compliance program. In addition, all employees must disclose any matters that cause, or may cause, actual or potential conflict of interest. In addition to such proactive disclosure requirement, employees with certain job responsibilities and senior officers must annually declare any relationships that may constitute a conflict of interest, which is then reviewed by executive management.



Internal Auditing: The Internal Auditor of TSMC plays a critical role in ensuring the Company's compliance with the Code and relevant rules and regulations. To ensure that our financial, managerial, and operating information is accurate, reliable, and timely and that our employee's actions are in compliance with applicable policies, standards, procedures, laws and regulations, our Internal Auditor conducts audits of various control points within the Company in accordance with its annual audit plan approved by the Board of Directors and subsequently reports its audit findings and remedial issues to the Board and management on a regular basis.

Training and Promotion: To promote awareness to our employees of their responsibilities under the Code, we publish our Code and related policies and documents on our intranet and, provide training courses, posters, and internal news articles. For incoming employees, we provide an introductory training course on the Code which is available to all employees online, as well as advanced courses delving into more specific compliance topics such as anti-corruption, PIP, export control and insider trading.

In addition to our internal compliance efforts, we expect and assist our customers, suppliers, business partners, and any other entities with whom we deal (such as consultants or third party agents who act for or on behalf of TSMC) to recognize and understand TSMC's ethical standards to fulfill our responsibilities as a corporate citizen. For instance, we require all of our suppliers to declare in writing that they will not engage in any fraud or any unethical conduct when dealing with us, our officers, or employees. In 2015, TSMC became a full member of the Electronic Industry Citizenship Coalition (EICC) dedicated to electronics supply chain sustainability. In addition to adopting the EICC Code of Conduct at all of its facilities, TSMC applied the EICC's standards to enhance our audit program of our suppliers and relevant business partners. We provide training and communicate our ethical culture to our suppliers through live seminars to prevent any unethical conduct and detect any sign of Code violations. We exchange views on appropriate business conduct and TSMC's ethical standards with our customers as part of customer audit programs and other occasions.

**Reporting Channels and Whistleblower Protection**

To ensure that our conduct meets relevant legal requirements and the highest ethical standards under the Code, TSMC

provides multiple channels for reporting business conduct concerns. First of all, our Audit Committee approved and we have implemented the "Complaint Policy and Procedures for Certain Accounting and Legal Matters" and "Procedures for Ombudsman System" that allow employees or any whistleblowers with relevant evidence to report any financial, legal, or ethical irregularities anonymously through either the Ombudsman or directly to the Audit Committee. TSMC maintains additional internal reporting channels for our employees. To foster an open culture of ethics compliance, we encourage our employees and the third parties we do business with to report any suspected wrongdoing by TSMC or by any parties with whom we do business.

TSMC treats any complaint and the investigation thereof in a confidential and sensitive manner, and strictly prohibits any form of retaliation against any individual who in good faith reports or helps with the investigation of any complaint.

Due to the open reporting channels, TSMC received reports on various issues from employees and external parties such as our customers and suppliers from time to time. Below is a summary of the Number of Reported Incidents. We did not receive any report related to finance or accounting matters in 2016.

	FY 2014	FY 2015	FY 2016
Incidents reported to the Ombudsman System	39	60	80 (Note 1)
Incidents reported to the Audit Committee Whistleblower System	-	-	1
Incidents reported to the "Irregular Business Conduct Reporting"	22	16	35 (Note 2)
Total incidents investigated as founded	-	-	2 (Note 3)
Sexual Harassment Investigation Committee	4	7	5
Total incidents investigated as founded	4	7	5

Note 1: Among the 80 cases, no incidents related to ethics matters.  
 Note 2: Among the 35 cases, 15 cases related to ethics matters.  
 Note 3: Two employees involved in these two cases separately were discharged after TSMC's investigation confirmed their violation of the Code. TSMC also pressed criminal charge against one of the employees, and the case is currently under investigation by the authority.

**Code Violation Disciplinary Action**

We do not tolerate any violation of the Code and treat every possible violation incident seriously. Any violator of the Code (or relevant regulations) will be severely disciplined to the full extent of our policies and the law, including immediate dismissal, termination of business relationship, and judicial prosecution as appropriate.

**3.5.1 Taiwan Corporate Conduct and Ethics Implementation as Required by the Taiwan Financial Supervisory Commission**

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Summary	
1. Establishment of Corporate Conduct and Ethics Policy and Implementation Measures (1) Does the company have bylaws and publicly available documents addressing its corporate conduct and ethics policy and measures, and the commitment regarding implementation of such policy from the Board of Directors and the management team?  (2) Does the company establish relevant policies which are duly enforced to prevent unethical conduct and provide implementation procedures, guidelines, consequence of violation and complaint procedures in such policies?  (3) Does the company establish appropriate compliance measures for the business activities prescribed in paragraph 2, article 7 of the Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies and any other such activities associated with high risk of unethical conduct?	V		(1) Integrity is the most important core value of TSMC's culture. TSMC is committed to acting ethically in all aspects of our business. We have established TSMC Code of Ethics and Business Conduct (the "Code") to require that each employee bears a heavy personal responsibility to uphold TSMC's ethics value. For more details on the Code and the measures that TSMC Board of Directors (the "Board") and the management team take to ensure compliance of the Code please refer to TSMC's Annual Report and the Corporate Social Responsibility Report.  (2) At the heart of our corporate governance culture is the Code that applies to TSMC and its subsidiaries, and this Code requires that each employee bears a heavy personal responsibility to preserve and to protect TSMC's ethical values and reputation and to comply with various applicable laws and regulations. Specific requirements under the Code could be found in our Annual Report. In addition, to educate and remind our employees of their responsibilities under the Code, we publish our Code, relevant policies and documents on our intranet and promote its awareness through training courses, posters, and internal news articles. Furthermore, to ensure that our conduct meets relevant legal requirements and the highest ethical standards under the Code, TSMC provides multiple channels for reporting business conduct concerns. Please refer to Assessment Item 3 for details. We do not tolerate any violation of the Code and treat every possible violation incident seriously. Any violator of the Code (or relevant regulations) will be severely punished to the full extent of our policies and the law, including immediate dismissal in accordance with TSMC Employee Recognition, Disciplinary and Ombudsman Procedure, termination of business relationship, and judicial prosecution as appropriate.  (3) Under the framework of the Code, TSMC has established a regulatory compliance program that includes policies, guidelines and procedures in other policy areas, including: Anti-corruption, Anti-harassment/discrimination, Antitrust (unfair competition), Environment, Export Control, Financial Reporting/Internal Controls, Insider Trading, Intellectual Property, Proprietary Information Protection ("PIP"), Privacy, Record Retention and Disposal, as well as procuring raw materials from socially responsible sources ("Conflict-free Minerals"). The above-mentioned policies are crucial in strengthening overall compliance with the Code. TSMC, its employees and its subsidiaries are expected to fully understand and comply with all laws and regulations that govern our businesses. The Internal Auditor of TSMC also plays a critical role in ensuring the Company's compliance with the Code and relevant rules and regulations. To ensure that our financial, managerial, and operating information is accurate, reliable, and timely and that our employee's actions are in compliance with applicable policies, standards, procedures, laws and regulations, our Internal Auditor conducts audits of various control points within the Company in accordance with its annual audit plan approved by the Board of Directors and subsequently reports its audit findings and remedial issues to the Board and Management on a regular basis.	None

(Continued)

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Summary	
<p>2. Ethic Management Practice</p> <p>(1) Does the company assess the ethics records of whom it has business relationship with and include business conduct and ethics related clauses in the business contracts?</p>	V		(1) We expect and assist our customers, suppliers, business partners, and any other entities with whom we deal (such as consultant or third party agents who act for or on behalf of TSMC) to understand and act in accordance with TSMC's ethical standards. For instance, as for our suppliers, we require all of them to declare in writing that they will not engage in any fraud or any unethical conduct when dealing with us or our officers and employees. In addition to periodic audit, we provide training and communicate our ethical culture to our suppliers through live seminars to prevent any unethical conduct. We exchange views on business conduct and TSMC's ethical standards with our customers in customer audit programs and other proper occasions.	None
<p>(2) Does the company set up a unit which is dedicated to or tasked with promoting the company's ethical standards and reports directly to the Board of Directors with periodical updates on relevant matters?</p>	V		(2) TSMC's Board of Directors strives to perform the responsibilities of supervising the corporate conduct and ethics compliance practice through the Audit Committee and the Compensation Committee, the hiring of a financial expert for the Audit Committee, and coordination with the Internal Audit department. The General Counsel and the Corporate & Compliance Legal Division (which directly reports to the General Counsel) promotes, with other divisions, the Company's ethical standards, and the General Counsel reports directly quarterly to the Board on the implementation status. In addition, the responsible corporate Vice President who oversees the Ombudsmen system and Internal Auditors update the Board ethical standards compliance issues on a regular basis. Moreover, TSMC's officers, especially our CEO, CFO, and General Counsel, with oversight from our Board, are responsible for the full, fair, accurate, timely, and understandable financial accounting and financial disclosure in reports and documents filed by the Company with securities authorities and in all TSMC public communications and disclosures.	
<p>(3) Does the company establish policies to prevent conflict of interests, provide appropriate communication and complaint channels and implement such policies properly?</p>	V		(3) TSMC requires newly hired employees to declare any conflict of interest situation as appropriate. In addition, all employees must disclose any matters that have, or may have, the appearance of undermining the Code (such as any actual or potential conflict of interest). Furthermore, key employees and senior officers must periodically declare their compliance status with the Code according to relevant procedures.	
<p>(4) To implement relevant policies on ethical conducts, does the company establish effective accounting and internal control systems that are audited by internal auditors or CPA periodically?</p>	V		(4) TSMC continues maintaining the integrity of its financial reporting processes and controls and establishes appropriate internal control systems for preventing higher potential unethical conduct, and the Internal Auditors formulate annual audit plans based on the results of the risk assessment and subsequently reports its audit findings and remedial issues to the Board and Management on a regular basis. In addition, all departments and subsidiaries of TSMC are also required to conduct Control Self-Assessment (CSA) tests annually to review the effectiveness of the internal control system.	
<p>(5) Does the company provide internal and external ethical conduct training programs on a regular basis?</p>	V		(5) Training is a major component of our compliance program, conducted throughout the year to refresh TSMC's employees' commitment to ethical conduct, and to get updated information on laws and regulations related to their daily operations. As for our suppliers, we communicate our ethical culture to our business partners through live seminars to ensure their fully understanding of our commit to ethical conduct.	
<p>3. Implementation of Complaint Procedures</p> <p>(1) Does the company establish specific complaint and reward procedures, set up conveniently accessible complaint channels, and designate responsible individuals to handle the complaint received?</p>	V		(1) TSMC's Audit Committee approved and TSMC has implemented the "Complaint Policy and Procedures for Certain Accounting and Legal Matters" and "Procedures for Ombudsman System" that allow employees or any whistleblowers with relevant evidence to report any financial, legal, or ethical irregularities anonymously through either the Ombudsman or directly to the Audit Committee. TSMC also requires all employees to stay vigilant and whistle-blow any noncompliance by anyone to their supervisors, the function head of Human Resources, the responsible corporate Vice President that oversees the Ombudsmen system, or to the Chairman of the Company's Audit Committee directly.	None
<p>(2) Does the company establish standard operation procedures for investigating the complaints received and ensuring such complaints are handled in a confidential manner?</p>	V		(2) TSMC treats any complaint and the investigation thereof in a confidential and sensitive manner, and such manner is clearly stated in our bylaws.	
<p>(3) Does the company adopt proper measures to prevent a complainant from retaliation for his/her filing a complaint?</p>	V		(3) TSMC strictly prohibits any form of retaliation against any individual who in good faith reports or helps with the investigation of any complaint, and such requirement is clearly stated in our bylaws.	

(Continued)

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Summary	
<p>4. Information Disclosure</p> <p>Does the company disclose its guidelines on business ethics as well as information about implementation of such guidelines on its website and Market Observation Post System ("MOPS")?</p>	V		Our internal website provides guidelines and informative articles on ethics and honorable business conduct (in both Chinese and English) for employees' easy access. In addition, TSMC discloses relevant policies and information in its Annual Report (which is also available at the MOPS) and CSR Report (available at: <a href="http://www.tsmc.com">http://www.tsmc.com</a> )	None
<p>5. If the company has established corporate governance policies based on TSE Corporate Conduct and Ethics Best Practice Principles, please describe any discrepancy between the policies and their implementation.</p> <p>TSMC has established the Code to require that all employees, officers and board members comply with the Code and the other policies and procedures. There is no discrepancy between the Code, including its affiliate policies and procedures, and its implementation. For more details, please refer to "3.5 Code of Ethics and Business Conduct" on page 49-53 of this Annual Report.</p>				
<p>6. Other important information to facilitate better understanding of the company's corporate conduct and ethics compliance practices (e.g., review the company's corporate conduct and ethics policy).</p> <p>For details on the implementation of TSMC's Corporate Conduct and Ethics, please refer to "3.5 Code of Ethics and Business Conduct" on page 49-53 of this Annual Report.</p>				

### 3.6 Regulatory Compliance

TSMC's robust compliance efforts are comprised of legislation monitoring, developing and implementation of effective compliance policies and programs, training, and maintaining an open reporting environment.

#### Legislative Monitoring

TSMC operates in many countries. To comply with governing legislation, applicable laws, regulations and regulatory expectations, we closely monitor domestic and foreign government policies and regulatory developments that could materially impact TSMC's business and financial operations. Our Legal organization periodically updates our relevant internal departments, management and the Audit Committee of applicable regulatory changes so that internal teams ensure compliance with new regulatory requirements in a timely manner. We are also a proactive advocate for local legislative and regulatory reform, and our comments and recommendations on legal reforms to the government have been accepted constructively. TSMC is increasingly dedicated to identifying potential regulatory issues and will continue to be involved in advocating public policy changes that foster a positive and fair business environment.

#### Policy and Compliance Program Development and Implementation

Under the framework of the Code, TSMC has established a regulatory compliance program that includes policies, guidelines and procedures in different compliance areas, including: Anti-corruption, Anti-harassment/discrimination, Employment Regulations, Antitrust (unfair competition), Environment, Export Control, Financial Reporting, Internal Controls, Insider Trading, Intellectual Property, Proprietary Information Protection ("PIP"), Privacy, Record Retention and Disposal, as well as procuring raw materials from socially responsible sources ("Conflict-free Minerals"). It is our belief that these policies are crucial in strengthening overall compliance with the Code and compliance program. TSMC, its employees and its subsidiaries are expected to fully understand and comply with all laws and regulations that govern our businesses and make ethical decisions in every circumstance.

#### Compliance Awareness Training

Training is a major component of our regulatory compliance program, conducted throughout the year to refresh TSMC's employees' commitment to ethical conduct, and to get updated information on laws and regulations related to their daily operations.

Highlights of our training include:

- Awareness promotion emails to employees, posters at our facilities, and news articles, compliance guidelines, tips and FAQs which our employees can access through our intranet;
- Live seminars focusing on specific topics such as Anti-Corruption (this was the highlight of our compliance training activities for 2016, PIP, Intellectual Property, Personal Data Protection, Conflict Minerals Compliance and Export Control Management. Training is made mandatory for those employees whose jobs are especially relevant to a particular topic to ensure sufficient awareness of relevant laws and internal policies;
- On-line learning programs updated frequently to provide most up-to-date information and timely and flexible access for employees to understand the law and key compliance issues, covering topics of Antitrust, Anti-harassment, Insider Trading, Export Control Management, PIP, and Privacy Protection among others;
- External training, in Taiwan and abroad, for TSMC's legal team to receive current developments of new laws and regulations, and for its lawyers to comply with applicable continuing legal education requirements. External experts are also invited to give in-house lectures on key issues.

### Major Accomplishments

In 2016, TSMC achieved several major accomplishments in regulatory compliance:

- **Public Promotion Activities:** In addition to fulfilling our obligations on regulatory compliance matters, TSMC exercised its civic duties as a responsible corporate citizen by advising the local government on law and policy reform, including urging the Government to amend certain outdated laws and regulations, which we believe were inconsistent with global practice, to improve Taiwan's investment environment and economic development. For example, since Taiwan legislature's acceptance of TSMC's advice to impose criminal liability for trade secret misappropriation in 2012, TSMC continues to be an advocate of trade secret protection which is critical to innovation and fair competition, and hosted and attended multiple events to raise industries' awareness of the importance of this topic.
- **Internal Training:** Throughout 2016, TSMC offered a wide range of training courses on various compliance topics, including 12 on-line training courses, and 42 topics covered via live seminars. These courses were all developed and conducted by internal and external compliance experts and legal professionals.
- **Continuous Awareness Enhancement of Ethics Code and Anti-Corruption:** Any corruption or other violation of the Code could not only impose long-term negative influence on our competitiveness, but could also seriously damage our strong industry reputation. To enhance employees' and external partners' awareness of the Code and anti-corruption rules, the Legal organization set the two topics as our awareness enhancement focus in 2016 and held a series of promotion activities through multiple channels, including: (1) provided over 50 face-to-face training sessions to approximately 3,000 employees, especially manager-level, from various internal organizations to promote awareness of and ensure compliance with TSMC's business conduct standards when interacting with third parties; (2) provided two on-line training programs to approximately 26,000 manager-level and non-manager-level employees, (including those of our subsidiaries); (3) provided 8 live seminars to over 700 suppliers (a special focus for 2016) for a completion rate of 96%; (4) promoted reporting channels and whistleblower rights by emails and through posters throughout our facilities. Ahead into 2017, it is our objective to continuously provide compliance training on these and other compliance topics to our employees.

- **Conflict-Free Supply Chain:** As a recognized global leader in the electronics industry supply chain, we acknowledge our corporate social responsibility to strive to procure conflict free minerals in an effort to recognize humanitarian and ethical social principles that protect the dignity of all persons and have implemented a series of compliance safeguards. In 2016, TSMC has made continued progress to ensure a conflict-free supply chain, and our conflict-free minerals compliance program has also been highly ranked by independent third party rating agencies.
- **Export Compliance:** TSMC's export management system (EMS) and policy has been in place for a number of years, and is continuously maintained to ensure compliance with all applicable regulations covering the export of information, technologies, products, materials and equipment. Our EMS was certified in September 2012 by the Bureau of Foreign Trade, the Taiwan regulator, as a qualified ICP (Internal Compliance Program) exporter. In addition, TSMC implements "No ECCN, No Shipment" control and customers are required to provide end use and export control classification number (ECCN) of the products, among other required information, for TSMC to apply for applicable export licenses. TSMC has frequently earned recognition as "best in class" and often shares our experience on EMS implementation to third parties including a variety of domestic and foreign organizations and industry peers. In 2016 TSMC was recognized by World Export Control Review (World ECR), a well-known international online journal of export controls, as the Export Controls Compliance team of the year for the Rest of the World (outside USA and Europe). We also provided an on-line learning program, live seminars, promotion emails, and posters at our facilities to further enhance relevant employees' awareness of the topic.
- **Other Major Compliance Topics:** For other importance compliance topics such as privacy protection, insider trading, anti-harassment, and PIP, in 2016 we not only provided and updated, if necessary, relevant on-line courses and resources, but enhanced employees' awareness by promotion emails and through posters at facilities. Employees were mandatorily required to complete on-line courses for both anti-harassment and PIP.

### 3.7 Internal Control System Execution Status

#### 3.7.1 Statement of Internal Control System

##### Taiwan Semiconductor Manufacturing Company Limited

##### Statement of Internal Control System

Date: February 14, 2017

Based on the findings of a self-assessment, Taiwan Semiconductor Manufacturing Company Limited (TSMC) states the following with regard to its internal control system during the year 2016:

1. TSMC's board of directors and management are responsible for establishing, implementing, and maintaining an adequate internal control system. Our internal control is a process designed to provide reasonable assurance over the effectiveness and efficiency of our operations (including profitability, performance and safeguarding of assets), reliability, timeliness, transparency of our reporting, and compliance with applicable rulings, laws and regulations.
2. An internal control system has inherent limitations. No matter how perfectly designed, an effective internal control system can provide only reasonable assurance of accomplishing its stated objectives. Moreover, the effectiveness of an internal control system may be subject to changes due to extenuating circumstances beyond our control. Nevertheless, our internal control system contains self-monitoring mechanisms, and TSMC takes immediate remedial actions in response to any identified deficiencies.
3. TSMC evaluates the design and operating effectiveness of its internal control system based on the criteria provided in the Regulations Governing the Establishment of Internal Control Systems by Public Companies (herein below, the Regulations). The criteria adopted by the Regulations identify five key components of managerial internal control: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring activities.
4. TSMC has evaluated the design and operating effectiveness of its internal control system according to the aforesaid Regulations.
5. Based on the findings of such evaluation, TSMC believes that, on December 31, 2016, it has maintained, in all material respects, an effective internal control system (that includes the supervision and management of our subsidiaries), to provide reasonable assurance over our operational effectiveness and efficiency, reliability, timeliness, transparency of reporting, and compliance with applicable rulings, laws and regulations.
6. This Statement is an integral part of TSMC's annual report for the year 2016 and prospectus, and will be made public. Any falsehood, concealment, or other illegality in the content made public will entail legal liability under Articles 20, 32, 171, and 174 of the Securities and Exchange Law.
7. This statement was passed by the board of directors in their meeting held on February 14, 2017, with none of the eight attending directors expressing dissenting opinions, and the remainder all affirming the content of this Statement.

Taiwan Semiconductor Manufacturing Company Limited

Morris Chang,  
Chairman

Mark Liu,  
President and Co-Chief Executive Officer

C.C. Wei,  
President and Co-Chief Executive Officer



3.7.2 If CPA was Engaged to Conduct a Special Audit of Internal Control System, Provide Its Audit Report: None.

### 3.8 Status of Personnel Responsible for the Company's Financial and Business Operation

3.8.1 Resignation or Dismissal of Chairman, President, and Heads of Accounting, Finance, Internal Audit and R&D during the 2016 Calendar Year and as of the Date of this Annual Report: None.

### 3.8.2 Certification of Employees Whose Jobs are Related to the Release of the Company's Financial Information

Certification	Number of Employees	
	Internal Audit	Finance
Certified Public Accountants (CPA)	3	30
US Certified Public Accountants (US CPA)	3	15
The Chartered Institute of Management Accountants (CIMA)	-	1
Certified Internal Auditor (CIA)	13	6
Chartered Financial Analyst (CFA)	-	3
Certified Management Accountant (CMA)	-	2
Financial Risk Manager (FRM)	-	2
Certificate in Financial Management (CFM)	-	1
Certification in Control Self-Assessment (CCSA)	3	-
Certification in Risk Management Assurance (CRMA)	4	-
Certified Information Systems Auditor (CISA)	5	-
BS7799/ISO 27001 Lead Auditor	2	-

### 3.9 Information Regarding TSMC's Independent Auditor

#### 3.9.1 Audit Fees

The Audit Committee approves all fees payable to TSMC's independent auditor and recommends the same to the Board of Directors for further approval. The Board of Directors has authorized the Audit Committee to approve any increase not exceeding 10% of the approved fees.

Unit: NT\$ thousands

Accounting Firm	Name of CPA	Audit Fee	Non-audit Fee					CPA's Audit Period	Remark
			System Design	Company Registration	Human Resource	Others (Note 1)	Subtotal		
Deloitte & Touche	Yih-Hsin Kao, Yu-Feng Huang, and others	57,926	-	-	2,098	84	2,182	01/01/2016-12/31/2016	Note 2

Note 1: Fees mainly related to accounting research tool.

Note 2: Article 10.5.1 of Regulation Governing Information to be published in Annual Report of Public Companies was not applicable to TSMC.

### 3.9.2 CPA's information

#### (1) Former CPAs

Date of Change	Approved by BOD on November 10, 2015		
Reasons and Explanation of Changes	Due to its internal personal changes, Deloitte & Touche updated the audit partners for TSMC from Yih-Hsin Kao and Hung-Wen Huang to Yih-Hsin Kao and Yu-Feng Huang in 2016.		
State Whether the Appointment is Terminated or Rejected by the Consignor or CPAs	Client	CPA	Consignor
	Status	Not available	Not available
	Appointment terminated automatically	Not available	Not available
	Appointment rejected (discontinued)	Not available	Not available
The Opinions other than Unmodified Opinion Issued in the Last Two Years and the Reasons for the Said Opinions (Note)	None		
Is there any Disagreement in Opinion with the Issuer	Yes		Accounting principle or practice
			Disclosure of financial statements
			Auditing scope or procedures
			Others
	No	V	
Explanation			
Supplementary Disclosure (Disclosures Specified in Article 10.6.1.4~7 of the Standards)	None		

Note: Starting in 2016, the new auditing standard of the Republic of China requires "An Unqualified Opinion" be replaced by "An Unmodified Opinion".

#### (2) Successor CPAs

Accounting Firm	Deloitte & Touche
CPA	Yih-Hsin Kao and Yu-Feng Huang
Date of Engagement	Approved by BOD on November 10, 2015
Prior to the Formal Engagement, Any Inquiry or Consultation on the Accounting Treatment or Accounting Principles for Specific Transactions, and the Type of Audit Opinion that Might be Rendered on the Financial Report	None
Written Opinions from the Successor CPAs that are Different from the Former CPA's Opinions	None

(3) The Reply of Former CPAs on Article 10.6.1 and Article 10.6.2.3 of the Standards: None.

### 3.9.3 TSMC's Chairman, Directors, Chief Executive Officer, Chief Financial Officer, and Managers in Charge of Its Finance and Accounting Operations did not Hold any Positions within TSMC's Independent Audit Firm or Its Affiliates in the Most Recent Year.

### 3.9.4 Evaluation of the External Auditor's Independence

The Audit Committee regularly monitors the independence of TSMC's external auditor by conducting the below evaluations and reports the same to the Board of Directors:

1. The auditor's independence declaration
2. The Audit Committee pre-approves all audit and non-audit services conducted by the auditor to ensure that the non-audit services do not influence the results of the audit
3. Ensure the audit partner rotates every five years
4. Annually evaluate the independence of the external auditor based on the results of the auditor survey

### 3.10 Material Information Management Procedure

TSMC has established relevant procedures for managing and disclosing material information. The responsible departments regularly remind all officers and employees about the need to comply with these procedures and other applicable regulations when they become aware of any potential material information and the possible need to publicly disclose such information. To ensure that our employees, managers and board directors are aware of and comply with these relevant regulations, TSMC has also established our "Insider Trading Policy". To reduce the risk of insider trading, on-line training programs and live seminars are conducted periodically. In addition, employees can familiarize themselves with relevant internal policies and training articles by easily accessing TSMC's Legal Organization intranet website.



# NT\$7.0

TSMC intends to maintain a stable and sustainable dividend policy and has proposed to raise its cash dividend payment to NT\$7.0 per share for 2016 earnings distribution from NT\$6.0 a year ago.





# Capital and Shares

## 4.1 Capital and Shares

### 4.1.1 Capitalization

Unit: Share/NT\$

As of 02/28/2017

Month/ Year	Issue Price (Per Share)	Authorized Share Capital		Capital Stock		Remark		
		Shares	Amount	Shares	Amount	Sources of Capital	Capital Increase by Assets Other than Cash	Date of Approval & Approval Document No.
07/2015	10	28,050,000,000	280,500,000,000	25,930,380,458	259,303,804,580	Exercise of Employee Stock Options: NT\$7,180,220	None	07/13/2015 Zhu Shang Tzu No.1040020526

### 4.1.2 Capital and Shares

Unit: Share

As of 02/28/2017

Type of Stock	Authorized Share Capital				Unissued Shares	Total
	Issued Shares			Total		
	Listed	Non-listed	Total			
Common Stock	25,930,380,458	-	25,930,380,458	2,119,619,542	28,050,000,000	

Shelf Registration: None.

### 4.1.3 Composition of Shareholders

Common Share

As of 07/03/2016 (last record date)

Type of Shareholders	Government Agencies	Financial Institutions	Other Juridical Persons	Foreign Institutions and Natural Persons	Domestic Natural Persons	Total
Number of Shareholders	8	173	1,113	4,005	323,327	328,626
Shareholding	1,653,959,189	716,013,819	1,163,831,208	20,342,510,801	2,054,065,441	25,930,380,458
Holding Percentage (%)	6.38%	2.76%	4.49%	78.45%	7.92%	100.00%

## Distribution Profile of Share Ownership

Common Share

As of 07/03/2016 (last record date)

Shareholder Ownership (Unit: Share)	Number of Shareholders	Ownership	Ownership (%)
1~999	149,756	33,827,984	0.13%
1,000~5,000	124,998	264,699,814	1.02%
5,001~10,000	24,023	171,313,860	0.66%
10,001~15,000	9,374	113,696,363	0.44%
15,001~20,000	4,219	73,977,870	0.29%
20,001~30,000	4,727	114,983,324	0.44%
30,001~40,000	2,255	77,940,198	0.30%
40,001~50,000	1,445	64,920,185	0.25%
50,001~100,000	2,863	200,555,113	0.77%
100,001~200,000	1,568	218,022,804	0.84%
200,001~400,000	1,027	286,323,448	1.10%
400,001~600,000	461	223,811,933	0.86%
600,001~800,000	289	201,307,575	0.78%
800,001~1,000,000	210	188,285,737	0.73%
Over 1,000,001	1,411	23,696,714,250	91.39%
Total	328,626	25,930,380,458	100.00%

Preferred Share: None.

### 4.1.4 Major Shareholders

Common Share

As of 07/03/2016 (last record date)

Shareholders	Total Shares Owned	Ownership (%)
ADR-Taiwan Semiconductor Manufacturing Company, Ltd.	5,363,175,253	20.68%
National Development Fund, Executive Yuan	1,653,709,980	6.38%
Government of Singapore	683,323,892	2.64%
JPMorgan Chase Bank N.A. Taipei Branch in Custody for Saudi Arabian Monetary Agency	391,625,559	1.51%
JPMorgan Chase Bank N.A. Taipei Branch in Custody for EuroPacific Growth Fund	354,750,649	1.37%
Norges Bank	311,950,515	1.20%
JPMorgan Chase Bank, N.A., Taipei Branch in Custody for Stichting Depository APG Emerging Markets Equity Pool	253,958,873	0.98%
Vanguard Emerging Markets Stock Index Fund, a Series of Vanguard International Equity Index Funds	252,443,845	0.97%
JPMorgan Chase Bank N.A. Taipei Branch in Custody for Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds	240,686,063	0.93%
JPMorgan Chase Bank N.A. Taipei Branch in Custody for ABU DHABI Investment Authority	237,325,761	0.92%



#### 4.1.5 Net Change in Shareholding by Directors, Management and Shareholders with 10% Shareholdings or More

Unit: Share

Title Name	2016		01/01/2017 ~ 02/28/2017	
	Net Change in Shareholding	Net Change in Shares Pledged (Note)	Net Change in Shareholding	Net Change in Shares Pledged (Note)
Chairman Morris Chang	-	-	-	-
Vice Chairman F.C. Tseng	-	-	-	-
Director National Development Fund, Executive Yuan Representative: Johnsee Lee	-	-	-	-
Independent Director Sir Peter Leahy Bonfield	-	-	-	-
Independent Director Stan Shih	-	-	-	-
Independent Director Thomas J. Engibous	-	-	-	-
Independent Director Kok-Choo Chen	-	-	-	-
Independent Director Michael R. Splinter	-	-	-	-
President and Co-Chief Executive Officer Mark Liu	-	-	-	-
President and Co-Chief Executive Officer C.C. Wei	-	-	-	-
Senior Vice President and Chief Information Officer Information Technology, Materials Management and Risk Management Stephen T. Tso	(320,000)	-	-	-
Senior Vice President, Chief Financial Officer and Spokesperson Finance Lora Ho	-	-	-	-
Senior Vice President Research and Development/Technology Development Wei-Jen Lo	-	-	(4,000)	-
Senior Vice President of TSMC and President of TSMC North America Rick Cassidy	-	-	-	-
Senior Vice President Operations/Product Development Y.P. Chin	(180,000)	-	(21,000)	-
Senior Vice President Research and Development/Technology Development Y.J. Mii	-	-	-	-
Vice President Operations/Affiliate Fabs M.C. Tzeng	(178,000)	-	(9,000)	-
Vice President and Chief Technology Officer Research and Development/Corporate Research Jack Sun	(225,000)	-	(25,000)	-
Vice President Quality and Reliability N.S. Tsai	(45,000)	-	-	-

(Continued)

Title Name	2016		01/01/2017 ~ 02/28/2017	
	Net Change in Shareholding	Net Change in Shares Pledged (Note)	Net Change in Shareholding	Net Change in Shares Pledged (Note)
Vice President Operations/Mainstream Fabs and Manufacturing Technology J.K. Lin	-	-	-	-
Vice President Operations/300mm Fabs J.K. Wang	-	-	-	-
Vice President Corporate Planning Organization Irene Sun	-	-	-	-
Vice President Research and Development/Design and Technology Platform Cliff Hou	-	-	-	-
Vice President Business Development Been-Jon Woo	80,000	-	-	-
Vice President and General Counsel Legal Sylvia Fang	-	350,000	-	-
Vice President Human Resources Connie Ma	30,000	-	-	-
Vice President Research and Development/Technology Development Y.L. Wang	-	-	-	-
Vice President Research and Development/Integrated Interconnect & Packaging Douglas Yu (Note)	-	-	-	-
Vice President Research and Development/More-than-Moore Technologies Alexander Kalnitsky (Note)	-	-	-	-
Vice President Research and Development/Design and Technology Platform Kevin Zhang (Note)	-	-	-	-

Note: Dr. Douglas Yu, Dr. Alexander Kalnitsky and Dr. Kevin Zhang were promoted to Vice Presidents, effective November 8, 2016. Their shareholdings were disclosed starting from that date.

#### 4.1.6 Stock Trade with Related Party

Name	Reason of the Transfer	Transfer Date	Transferee	Relation with the Transferer	Shares	Transfer Price
Wei-Jen Lo	Gifting	01/05/2017	Wei-Li Lo	Brother	4,000	-

#### 4.1.7 Stock Pledge with Related Party: None.

#### 4.1.8 Related Party Relationship among Our 10 Largest Shareholders

Common Share As of 07/03/2016 (last record date)

Name	Current Shareholding		Spouse and Minor Shareholding		TSMC Shareholding by Nominee Arrangement		Name and Relationship between TSMC's Shareholders	
	Shares	%	Shares	%	Shares	%	Name	Relationship
ADR-Taiwan Semiconductor Manufacturing Company, Ltd.	5,363,175,253	20.68%	N/A	N/A	N/A	N/A	None	None
National Development Fund, Executive Yuan Representative: Johnsee Lee	1,653,709,980	6.38%	N/A	N/A	N/A	N/A	None	None
	-	-	-	-	-	-	None	None
Government of Singapore	683,323,892	2.64%	N/A	N/A	N/A	N/A	None	None
JPMorgan Chase Bank N.A. Taipei Branch in Custody for Saudi Arabian Monetary Agency	391,625,559	1.51%	N/A	N/A	N/A	N/A	None	None
JPMorgan Chase Bank N.A. Taipei Branch in Custody for EuroPacific Growth Fund	354,750,649	1.37%	N/A	N/A	N/A	N/A	None	None
Norges Bank	311,950,515	1.20%	N/A	N/A	N/A	N/A	None	None
JPMorgan Chase Bank N.A. Taipei Branch in Custody for Stichting Depository APG Emerging Markets Equity Pool	253,958,873	0.98%	N/A	N/A	N/A	N/A	None	None
Vanguard Emerging Markets Stock Index Fund, a Series of Vanguard International Equity Index Funds	252,443,845	0.97%	N/A	N/A	N/A	N/A	None	None
JPMorgan Chase Bank N.A. Taipei Branch in Custody for Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds	240,686,063	0.93%	N/A	N/A	N/A	N/A	None	None
JPMorgan Chase Bank N.A. Taipei Branch in Custody for ABU DHABI Investment Authority	237,325,761	0.92%	N/A	N/A	N/A	N/A	None	None

#### 4.1.9 Long-term Investment Ownership

As of 12/31/2016

Long-term Investment	Ownership by TSMC (1)		Ownership by Directors, Managers and Directly/Indirectly Owned Subsidiaries (2)		Total Ownership (1) + (2)	
	Shares	%	Shares	%	Shares	%
<b>Equity Method:</b>						
TSMC Partners, Ltd.	988,268,244	100%	-	-	988,268,244	100%
TSMC Global Ltd.	7,284	100%	-	-	7,284	100%
TSMC North America	11,000,000	100%	-	-	11,000,000	100%
TSMC Europe B.V.	200	100%	-	-	200	100%
TSMC Japan Limited	6,000	100%	-	-	6,000	100%
TSMC Korea Limited	80,000	100%	-	-	80,000	100%
TSMC China Company Limited	Not Applicable (Note 1)	100%	Not Applicable (Note 1)	-	Not Applicable (Note 1)	100%
TSMC Nanjing Company Limited (Note 2)	Not Applicable (Note 1)	100%	Not Applicable (Note 1)	-	Not Applicable (Note 1)	100%
TSMC Solar Europe GmbH (Note 3)	800	100%	-	-	800	100%
VisEra Technologies Company Ltd. (Note 4)	253,120,000	86.94%	-	-	253,120,000	86.94%
Systems on Silicon Manufacturing Co. Pte. Ltd.	313,603	38.79%	-	-	313,603	38.79%
Vanguard International Semiconductor Corp.	464,223,493	28.32%	275,910,722	16.83% (Note 5)	740,134,215	45.16%
Xintec Inc. (Note 6)	111,281,925	41.24%	-	-	111,281,925	41.24%
Global UniChip Corporation	46,687,859	34.84%	-	-	46,687,859	34.84%
VentureTech Alliance Fund II, L.P.	Not Applicable (Note 1)	98.00%	Not Applicable (Note 1)	-	Not Applicable (Note 1)	98.00%
VentureTech Alliance Fund III, L.P.	Not Applicable (Note 1)	98.00%	Not Applicable (Note 1)	-	Not Applicable (Note 1)	98.00%
VentureTech Alliance Holdings, LLC (Note 7)	Not Applicable (Note 1)	7.29%	Not Applicable (Note 1)	92.67%	Not Applicable (Note 1)	100%

Note 1: Not applicable. These firms do not issue shares. TSMC's investment is measured as a percentage of ownership.

Note 2: TSMC Nanjing Company Limited was established in May 2016.

Note 3: The dissolution procedures of TSMC Solar Europe GmbH will be completed by the end of June 2017.

Note 4: Pursuant to TSMC Board's approval on August 2, 2016, TSMC acquired 86.94% shareholding in VisEra Technologies Company Ltd. from VisEra Holding Company, a wholly-owned subsidiary of TSMC, in August 2016. To streamline investment structure, VisEra Holding Company was merged into TSMC Partners, Ltd., the subsidiary of TSMC, in October 2016.

Note 5: TSMC's Director, National Development Fund of Executive Yuan, holds 16.72% while other Directors and Management hold 0.11%.

Note 6: Pursuant to TSMC Board's approval on August 2, 2016, TSMC acquired 6.87% shareholding in Xintec Inc. from VisEra Holding Company, a wholly-owned subsidiary of TSMC in August 2016. After the share purchase transaction, TSMC directly owned 41.24% of Xintec Inc.

Note 7: Due to the expiration of the investment agreement between Emerging Alliance Fund, L.P. and TSMC, Emerging Alliance Fund, L.P. completed the liquidation procedures in April 2016. As a result, Emerging Alliance Fund, L.P.'s ownership in VentureTech Alliance Holdings, LLC was transferred to TSMC.

#### 4.1.10 Share Information

TSMC's earnings per share in 2016 increased 9.0% from 2015 to NT\$12.89 per share. The following table details TSMC's market price, net worth, earnings, and dividends per common share, as well as other data regarding return on investment.

#### Market Price, Net Worth, Earnings, and Dividends Per Common Share

Unit: NT\$, except for weighted average shares and return on investment ratios

Item	2015	2016	01/01/2017 ~ 02/28/2017
<b>Market Price Per Share (Note 1)</b>			
Highest Market Price	154.50	193.00	190.00
Lowest Market Price	115.00	131.50	179.50
Average Market Price	139.84	166.36	185.06
<b>Net Worth Per Share</b>			
Before Distribution	47.11	53.58	-
After Distribution	41.11	(Note 5)	-
<b>Earnings Per Share</b>			
Weighted Average Shares (thousand shares)	25,930,380	25,930,380	-
Diluted Earnings Per Share	11.82	12.89 (Note 5)	-
<b>Dividends Per Share</b>			
Cash Dividends	6.00	7.00 (Note 5)	-
Accumulated Undistributed Dividend	-	-	-
<b>Return on Investment</b>			
Price/Earnings Ratio (Note 2)	11.83	12.91 (Note 5)	-
Price/Dividend Ratio (Note 3)	23.31	23.77 (Note 5)	-
Cash Dividend Yield (Note 4)	4.3%	4.2% (Note 5)	-

Note 1: Referred to TWSE website

Note 2: Price/Earnings Ratio = Average Market Price/Diluted Earnings Per Share

Note 3: Price/Dividend Ratio = Average Market Price/Cash Dividends Per Share

Note 4: Cash Dividend Yield = Cash Dividends Per Share/Average Market Price

Note 5: Pending for shareholders' approval

#### 4.1.11 Dividend Policy and Distribution of Earnings

TSMC does not pay dividends when there are no profits or retained earnings. TSMC has distributed cash dividends every year to its shareholders since 2004. TSMC intends to maintain a stable and sustainable dividend policy, and will consider raising dividends when the free cash flow is sufficient to cover the previous level of dividend payment and any debt repayment. On February 14, 2017, TSMC's Board of Directors adopted a proposal recommending distribution of a cash dividend of NT\$7 per share as shown in the table below. The proposal will be implemented according to the relevant regulations, upon the approval of shareholders at the Annual Shareholders' Meeting on June 8, 2017.

#### Proposal to Distribute 2016 Earnings

Unit: NT\$

Cash Dividends to Common Shareholders (NT\$7 per share)	181,512,663,206
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#### 4.1.12 Compensation to Directors and Profit Sharing Bonus to Employees

Based on TSMC's Articles of Incorporation, before paying dividends or bonuses to shareholders, TSMC shall set aside not more than 0.3% of its annual profit to directors as compensation, and not less than 1% to employees as profit sharing bonus. As resolved by TSMC's Board of Directors on February 14, 2017, a profit sharing bonus to employees was expensed based on a certain percentage of 2016 profit; compensation to directors was expensed based on the estimated amount of payment. If the actual amounts subsequently paid differ from the above estimated amounts, the differences will be recorded in the year paid as a change in accounting estimate.

#### 2016 Directors' Compensation and Employees' Profit Sharing Bonus

	Board Resolution (02/14/2017)	
	Amount (NT\$)	
Directors' Compensation (Cash)	376,432,200	
Employee's Profit Sharing Bonus (Cash)	22,418,339,262	
Total	22,794,771,462	

Note: NT\$22,418,339,262 employees' cash bonus has already been distributed following each quarter of 2016. The above employees' profit sharing bonus will be distributed in the third quarter of 2017.

#### 2015 Directors' Compensation and Employees' Profit Sharing Bonus

	Board Resolution (02/02/2016)	Actual Result (Note)
	Amount (NT\$)	Amount (NT\$)
Directors' Compensation (Cash)	356,186,472	356,186,472
Employees' Profit Sharing Bonus (Cash)	20,556,887,786	20,556,887,786
Total	20,913,074,258	20,913,074,258

Note: The above Directors' Compensation and Employees' Profit Sharing Bonus were expensed under the Company's 2015 statement of comprehensive income and the same amounts were approved by the Board of Directors at its meeting on February 2, 2016.

#### 4.1.13 Impact to 2017 Business Performance and EPS Resulting from Stock Dividend Distribution: Not applicable.

#### 4.1.14 Buyback of Common Stock: None.



## 4.2 Issuance of Corporate Bonds

### 4.2.1 Corporate Bonds

#### NTD Corporate Bonds

As of 02/28/2017

Issuance	Domestic Unsecured Bond (100-1)	Domestic Unsecured Bond (100-2)	Domestic Unsecured Bond (101-1)	Domestic Unsecured Bond (101-2)	Domestic Unsecured Bond (101-3)	Domestic Unsecured Bond (101-4)	Domestic Unsecured Bond (102-1)	Domestic Unsecured Bond (102-2)	Domestic Unsecured Bond (102-3)	Domestic Unsecured Bond (102-4)
Issuing Date	09/28/2011	01/11/2012	08/02/2012	09/26/2012	10/09/2012	01/04/2013	02/06/2013	07/16/2013	08/09/2013	09/25/2013
Denomination	NT\$10,000,000	NT\$10,000,000	NT\$10,000,000	NT\$10,000,000	NT\$10,000,000	NT\$10,000,000	NT\$10,000,000	NT\$10,000,000	NT\$10,000,000	NT\$10,000,000
Offering Price	Par	Par	Par	Par	Par	Par	Par	Par	Par	Par
Total Amount	NT\$18,000,000,000	NT\$17,000,000,000	NT\$18,900,000,000	NT\$21,700,000,000	NT\$4,400,000,000	NT\$23,600,000,000	NT\$21,400,000,000	NT\$13,700,000,000	NT\$12,500,000,000	NT\$15,000,000,000
Coupon	Tranche A: 1.40% p.a. Tranche B: 1.63% p.a.	Tranche A: 1.29% p.a. Tranche B: 1.46% p.a.	Tranche A: 1.28% p.a. Tranche B: 1.40% p.a.	Tranche A: 1.28% p.a. Tranche B: 1.39% p.a.	1.53% p.a.	Tranche A: 1.23% p.a. Tranche B: 1.35% p.a. Tranche C: 1.49% p.a.	Tranche A: 1.23% p.a. Tranche B: 1.38% p.a. Tranche C: 1.50% p.a.	Tranche A: 1.50% p.a. Tranche B: 1.70% p.a.	Tranche A: 1.34% p.a. Tranche B: 1.52% p.a.	Tranche A: 1.35% p.a. Tranche B: 1.45% p.a. Tranche C: 1.60% p.a. Tranche D: 1.85% p.a. Tranche E: 2.05% p.a. Tranche F: 2.10% p.a.
Tenor and Maturity Date	Tranche A: 5 years Maturity: 09/28/2016 Tranche B: 7 years Maturity: 09/28/2018	Tranche A: 5 years Maturity: 01/11/2017 Tranche B: 7 years Maturity: 01/11/2019	Tranche A: 5 years Maturity: 08/02/2017 Tranche B: 7 years Maturity: 08/02/2019	Tranche A: 5 years Maturity: 09/26/2017 Tranche B: 7 years Maturity: 09/26/2019	Tenor: 10 years Maturity: 10/09/2022	Tranche A: 5 years Maturity: 01/04/2018 Tranche B: 7 years Maturity: 01/04/2020 Tranche C: 10 years Maturity: 01/04/2023	Tranche A: 5 years Maturity: 02/06/2018 Tranche B: 7 years Maturity: 02/06/2020 Tranche C: 10 years Maturity: 02/06/2023	Tranche A: 7 years Maturity: 07/16/2020 Tranche B: 10 years Maturity: 07/16/2023	Tranche A: 4 years Maturity: 08/09/2017 Tranche B: 6 years Maturity: 08/09/2019	Tranche A: 3 years Maturity: 09/25/2016 Tranche B: 4 years Maturity: 09/25/2017 Tranche C: 5.5 years Maturity: 03/25/2019 Tranche D: 7.5 years Maturity: 03/25/2021 Tranche E: 9.5 years Maturity: 03/25/2023 Tranche F: 10 years Maturity: 09/25/2023
Outstanding	NT\$7,500,000,000	NT\$7,000,000,000	NT\$18,900,000,000	NT\$21,700,000,000	NT\$4,400,000,000	NT\$23,600,000,000	NT\$21,400,000,000	NT\$13,700,000,000	NT\$12,500,000,000	NT\$13,500,000,000
Credit Rating	twAAA (Taiwan Ratings Corporation, 08/24/2011)	twAAA (Taiwan Ratings Corporation, 12/06/2011)	twAAA (Taiwan Ratings Corporation, 07/02/2012)	twAAA (Taiwan Ratings Corporation, 08/23/2012)	twAAA (Taiwan Ratings Corporation, 09/04/2012)	twAAA (Taiwan Ratings Corporation, 11/29/2012)	twAAA (Taiwan Ratings Corporation, 12/18/2012)	twAAA (Taiwan Ratings Corporation, 05/16/2013)	twAAA (Taiwan Ratings Corporation, 07/15/2013)	twAAA (Taiwan Ratings Corporation, 08/06/2013)
Trustee	Mega International Commercial Bank			Taipei Fubon Commercial Bank						
Guarantor	None									
Underwriter	Not Applicable									
Legal Counsel	Modern Law Office									
Auditor	Deloitte & Touche									
Repayment	Bullet									
Redemption or Early Repayment Clause	None									
Covenants	None									
Other Rights of Bondholders	Conversion Right	None								
	Amount of Converted or Exchanged Common Shares, ADRs or Other Securities	Not Applicable								
Dilution Effect and Other Adverse Effects on Existing Shareholders	None									
Custodian	None									

#### USD Corporate Bonds

As of 02/28/2017

Issuance	Senior Unsecured Notes (Note)
Issuing Date	04/03/2013
Denomination	US\$200,000 and integral multiples of US\$1,000 in excess thereof
Listing	Singapore Exchange
Offering Price	2016 Notes: 99.988% 2018 Notes: 99.933%
Total Amount	US\$1,500,000,000
Coupon	2016 Notes: 0.950% p.a. 2018 Notes: 1.625% p.a.
Tenor and Maturity Date	2016 Notes: 3 years Maturity: 04/03/2016 2018 Notes: 5 years Maturity: 04/03/2018
Guarantor	TSMC
Trustee	Citicorp International Limited
Underwriter	Goldman Sachs International

(Continued)

Legal Advisor	Jones Day Maples and Calder	
Auditor	Deloitte & Touche	
Repayment	Bullet	
Outstanding	US\$1,150,000,000	
Redemption or Early Repayment Clause	At issuer's option	
Covenants	Limitations on (1) liens and (2) sale and leaseback transactions	
Credit Rating	A1 (Moody's Investors Service, 03/15/2013) A+ (Standard & Poor's Rating Services, 03/15/2013)	
Other Rights of Bondholders	Conversion Right	None
	Amount of Converted or Exchanged Common Shares, ADRs or Other Securities	Not Applicable
Dilution Effect and Other Adverse Effects on Existing Shareholders	None	
Custodian	None	

Note: Issued by TSMC Global Ltd., a wholly-owned subsidiary of TSMC, and unconditionally and irrevocably guaranteed by TSMC.

4.2.2 Convertible Bond: None.

4.2.3 Exchangeable Bond: None.

4.2.4 Shelf Registration: None.

4.2.5 Bond with Warrants: None.

#### 4.3 Preferred Shares

4.3.1 Preferred Share: None.

4.3.2 Preferred Share with Warrants: None.

#### 4.4 Issuance of American Depositary Shares

Issuing Date	10/08/1997	11/20/1998	01/12/1999 - 01/14/1999	07/15/1999	08/23/1999 - 09/09/1999	02/22/2000 - 03/08/2000	04/17/2000	06/07/2000 - 06/15/2000	05/14/2001 - 06/11/2001	06/12/2001	11/27/2001	02/07/2002 - 02/08/2002	11/21/2002 - 12/19/2002	07/14/2003 - 07/21/2003	11/14/2003	08/10/2005 - 09/08/2005	05/23/2007
Total Amount (US\$)	594,720,000	184,554,440	35,500,000	296,499,641	158,897,089	379,134,599	224,640,000	1,167,873,850	240,999,660	297,649,640	320,600,000	1,001,650,000	160,097,914	908,514,880	1,077,000,000	1,402,036,500	2,563,200,000
Offering Price Per ADS (US\$)	24.78	15.26	17.75	24.516	28.964	57.79	56.16	35.75	20.63	20.63	16.03	16.75	8.73	10.40	10.77	8.6	10.68
Units Issued	24,000,000	12,094,000	2,000,000	12,094,000	5,486,000	6,560,000	4,000,000	32,667,800	11,682,000	14,428,000	20,000,000	59,800,000	18,348,000	87,357,200	100,000,000	163,027,500	240,000,000
Common Shares Represented	120,000,000	60,470,000	10,000,000	60,470,000	27,430,000	32,800,000	20,000,000	163,339,000	58,410,000	72,140,000	100,000,000	299,000,000	91,740,000	436,786,000	500,000,000	815,137,500	1,200,000,000
Underlying Securities	TSMC Common Shares from Selling Shareholders	TSMC Common Shares from Selling Shareholders	TSMC Common Shares from Selling Shareholders	TSMC Common Shares from Selling Shareholders	TSMC Common Shares from Selling Shareholders (Pursuant to ADR Conversion Sale Program)	TSMC Common Shares from Selling Shareholders (Pursuant to ADR Conversion Sale Program)	TSMC Common Shares from Selling Shareholders	Cash Offering and TSMC Common Shares from Selling Shareholders	TSMC Common Shares from Selling Shareholders (Pursuant to ADR Conversion Sale Program)	TSMC Common Shares from Selling Shareholders	TSMC Common Shares from Selling Shareholders	TSMC Common Shares from Selling Shareholders	TSMC Common Shares from Selling Shareholders (Pursuant to ADR Conversion Sale Program)	TSMC Common Shares from Selling Shareholders	TSMC Common Shares from Selling Shareholders	TSMC Common Shares from Selling Shareholders	TSMC Common Shares from Selling Shareholders
Apportionment of Expenses for Issuance and Maintenance	(Note 3)							(Note 4)	(Note 3)								
Issuance and Listing	NYSE																
Rights and Obligations of ADS Holders	Same as those of Common Share Holders																
Trustee	Not Applicable																
Depository Bank	Citibank, N.A. - New York																
Custodian Bank (Note 1)	Citibank, N.A. - Taipei Branch																
ADSs Outstanding (Note 2)	As of February 28, 2017, total number of outstanding ADSs was 1,072,193,632.																
Terms and Conditions in the Deposit Agreement and Custody Agreement	See Deposit Agreement and Custody Agreement for Details																
Closing Price Per ADS (US\$; source: Bloomberg)	2016 (Note 5)	High	31.55														
		Low	19.73														
		Average	26.36														
	01/01/2017 - 02/28/2017	High	32.34														
		Low	29.29														
		Average	30.74														

Note 1: Citibank, N.A., Taipei Branch changed its name to "Citibank Taiwan Limited" in 2009.

Note 2: TSMC has in aggregate issued 813,544,500 ADSs since 1997, which, if taking into consideration stock dividends distributed over the period, would amount to 1,147,835,205 ADSs. Stock dividends distributed in 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008 and 2009 were 45%, 23%, 28%, 40%, 10%, 8%, 14.08668%, 4.99971%, 2.99903%, 0.49991%, 0.50417% and 0.49998%, respectively. As of February 28, 2017, total number of outstanding ADSs was 1,072,193,632 after 75,641,573 were redeemed.

Note 3: All fees and expenses such as underwriting fees, legal fees, listing fees and other expenses related to issuance of ADSs were borne by the selling shareholders, while maintenance expenses such as annual listing fees and accountant fees were borne by TSMC.

Note 4: All fees and expenses such as underwriting fees, legal fees, listing fees and other expenses related to issuance of ADSs were borne proportionately by TSMC and the selling shareholders, while maintenance expenses such as annual listing fees and accountant fees were borne by TSMC.

Note 5: Adjusted for cash dividend paid in 2016.

#### **4.5 Status of Employee Stock Option Plan**

All TSMC employee stock options expired and exercise completed in 2015. TSMC did not issue employee stock options in 2016, nor as of the date of this annual report.

**4.5.1 Issuance of Employee Stock Options:** Not applicable.

**4.5.2 Employee Stock Options Granted to Management Team and to Top 10 Employees:** Not applicable.

#### **4.6 Status of Employee Restricted Stock**

TSMC did not issue employee restricted stock in 2016, nor as of the date of this annual report.

**4.6.1 Status of Employee Restricted Stock:** Not applicable.

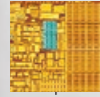
**4.6.2 Employee Restricted Stock Granted to Management Team and to Top 10 Employees:** Not applicable.

#### **4.7 Status of New Share Issuance in Connection with Mergers and Acquisitions**

TSMC neither issued new shares in connection with mergers or acquisitions during 2016, nor as of the date of this annual report.

**4.8 Financing Plans and Implementation:** Not applicable.





OFF Light

Security ON



20%

In 2016, TSMC expanded its library and silicon IP portfolio to contain more than 12,000 items, a 20% increase over 2015.



# Operational Highlights

## 5.1 Business Activities

### 5.1.1 Business Scope

As the founder and leader of the dedicated semiconductor foundry segment, TSMC provides a full range of integrated semiconductor foundry services, including the most advanced process technologies, leading specialty technologies, the most comprehensive design ecosystem support, excellent manufacturing productivity and quality, advanced mask and packaging services, and so on, to fulfill an increasing variety of customer needs. The Company strives to provide the best overall value to its customers and TSMC believes its customers' success is TSMC's success. As a result, TSMC has won customer trust from around the world and has experienced strong growth and success.

### 5.1.2 Customer Applications

TSMC manufactured 9,275 different products for 449 customers in 2016. These chips were used across the entire spectrum of electronic applications, including computers and peripherals, information appliances, wired and wireless communications systems, automotive and industrial equipment, consumer electronics such as DVDs, digital TVs, game consoles, digital still cameras and many other applications.

The rapid evolution of end products drives customers to use TSMC's innovative technologies and services, while at the same time spurring TSMC's own development of technology. As always, success depends on leading rather than following industry trends.

### 5.1.3 Consolidated Shipments and Net Revenue in 2016 and 2015

Unit: Shipments (thousand 12-inch equivalent wafers) / Net Revenue (NT\$ thousands)

		2016		2015	
		Shipments	Net Revenue	Shipments	Net Revenue
Wafer	Domestic (Note 1)	1,849	129,150,510	1,588	100,189,156
	Export	7,757	780,028,641	7,175	702,748,813
Others (Note 2)	Domestic (Note 1)	N/A	5,369,724	N/A	5,535,154
	Export	N/A	33,389,469	N/A	35,024,245
Total	Domestic (Note 1)	1,849	134,520,234	1,588	105,724,310
	Export	7,757	813,418,110	7,175	737,773,058

Note 1: Domestic means sales to Taiwan.

Note 2: Others majorly include revenue associated with mask making, design services, and royalties.

### 5.1.4 Production in 2016 and 2015

Unit: Capacity / Output (million 12-inch equivalent wafers) / Amount (NT\$ millions)

Year	Wafers		
	Capacity	Output	Amount
2016	10-11	9-10	405,462
2015	9-10	8-9	378,871

## 5.2 Technology Leadership

### 5.2.1 R&D Organization and Investment

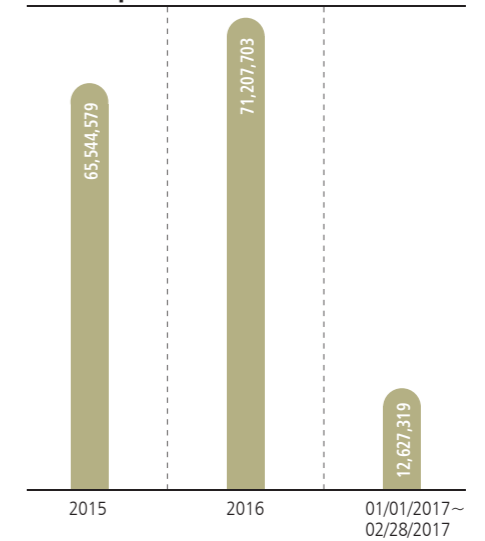
In 2016 TSMC continued to invest in research and development, with total R&D expenditures amounting to 8% of revenue, a level that equals or exceeds the R&D investment of many other leading high-tech companies.

TSMC recognizes that the technology challenge of continuing to extend Moore's Law, the doubling of semiconductor computing power every two years, is becoming increasingly complex and difficult. The efforts of the R&D organization are focused on enabling the Company to continuously offer its customers first-to-market, leading-edge technologies and design solutions that contribute to their product success in today's competitive market environment. In 2016 the R&D organization met these challenges by completing the transfer to manufacturing of the industry leading 10nm technology, the 3rd generation of technology platform to make use of 3D FinFET transistors. The R&D organization continues to fuel the pipeline of technological innovation needed to maintain industry leadership. TSMC's 7nm technology development is on track to meet the goal of production start-up in 2017. TSMC 5nm technology is now in the full development stage, and the definition and intensive early development efforts have been started for nodes beyond 5nm.

In addition to CMOS logic, TSMC conducts R&D on a wide range of other semiconductor technologies that provide the functionality customers require for mobile SoC and other applications. Highlights in 2016 include: the world's first high-volume production of Integrated Fan-Out Package on Package (InFO PoP) for mobile application processor packaging; successful qualification of InFO PoP Gen-2 advanced packaging technology for mobile applications and InFO wafer-level fine-pitch fan-out technology for die-partition and high-speed applications; 0.18 $\mu$ m second generation BCD (binary-coded decimal) technology resulting in the world's highest performance quick charger and wireless charger in 2016; successful production launch of e-Flash 65nm/55nm node, NOR-based cell technologies, including 1-T cell and split-gate cell; completion of qualification of the 40nm node, split-gate cell technology for consumer electronics applications such as IoT and smartcards; and development and manufacturing qualification of 650V D-MISFET, 100V E-HEMT, and RF 30V D-MISFET GaN devices.

TSMC maintains a network of important external R&D partnerships and alliances with world-class research institutions, including IMEC, the highly regarded European R&D consortium, where TSMC is a core partner. TSMC also provides funding for nanotechnology research at leading universities worldwide to promote innovation and the advancement of nano-electronic technology. TSMC has established four joint research centers within Taiwan: National Taiwan University, National Chao Tung University, National Tsing Hua University, and National Cheng Kung University. The goal of these centers is to develop greater understanding of the devices and materials used in the manufacture of advanced silicon technologies.

### R&D Expenditures



### 5.2.2 R&D Accomplishments in 2016

#### Highlights

#### • 10nm Technology

10nm technology offers substantial density improvement with better performance at same power or power reduction at the same chip performance compared to earlier technology generations and began customer product tape-out in the first quarter and production ramp-up in the fourth quarter of 2016.

#### • 7nm Technology

TSMC focused on the manufacturing baseline process setup, yield learning, transistor and interconnect R/C performance improvement and the reliability evaluation of 7nm technology, which offers significant density improvement with better performance at same power or lower power consumption at comparable performance vs. 10nm technology. During the

year, major customers and IP vendors completed IP design and started silicon validation. TSMC plans to complete 7nm qualification for risk production in 2017.

#### ● 5nm Technology

Development activities in 2016 focused on test vehicle design and implementation, mask making, and pilot run. Even though the semiconductor industry is approaching the physical limits of silicon, 5nm technology still follows Moore's Law and delivers substantial density improvement with better performance at same power or lower power consumption at comparable performance. TSMC will focus on manufacturing baseline process setup, yield learning, transistor and interconnect R/C performance improvement and reliability evaluation and plans to continue 5nm full development in 2017 and 2018 for risk production in 2019.

#### ● Lithography Technology

The main focus for RD lithography in 2016 is 7nm and 5nm development. For 7nm development, the primary focus is on continuous improvement of overlay control, defect reduction, and patterning robustness in preparation for 7nm qualification. As for 5nm development, EUV lithography will be used to reduce the complex multiple-patterning process steps. In 2017, TSMC will take the delivery of newest generation of EUV scanners to meet the tightened overlay control and imaging requirement for 5nm and beyond.

In 2016, the EUV program made continuous improvement in light-source power and its stability, which has enabled faster learning rate and process development for advanced nodes. Additional progress was made with resist process, pellicle, and related mask blanks, as EUV technology moves closer to full scale R&D and manufacturing readiness.

#### ● Mask Technology

Mask technology is an integral part of our advanced lithography. In 2016, R&D successfully completed the development of mask technology for the 7nm node. This technology is being transferred to the mask production organization. During the same period, solid progress was made on the development of mask technology for EUV lithography, including the reduction of native defects on mask blanks and the fabrication of EUV masks for lithographic processing of 7nm and 5nm nodes.

#### Integrated Interconnect and Packaging

CoWoS<sup>®</sup>, InFO and Under-Bump-Metallurgy Free Integration (UBM-free integration, UFI) are part of the generic wafer level

system integration (WLSI) technology platform, which leverages TSMC's core competency in wafer processes for heterogeneous system integration and packaging to meet the specific customer needs in performance, power, profile, cycle time and cost. InFO, UFI and CoWoS<sup>®</sup> are continuously evolving to fulfill diversified markets such as IoTs, automotive, high-performance computing and telecommunication.

#### ● 3D IC

2016 was a landmark year for system integration, as TSMC launched the world's first high-volume manufacturing (HVM) InFO PoP packaging for mobile applications processors. During the year, TSMC also successfully qualified InFO PoP Gen-2 advanced packaging technology for mobile applications and wafer-level fine-pitch InFO technology for die-partition and high-speed applications. Production ramp-up of fine-pitch fan-out HVM is expected in 2017. In interposer CoWoS<sup>®</sup> technology, the application was rapidly extended to 16nm starting from the FPGA (field programmable gate array) family. In addition, TSMC leads the industry by starting mass production of super high-end accelerators that integrate multiple HBM2 (second generation high bandwidth memory) chips and GPUs, resulting in a brand new application for CoWoS<sup>®</sup> in the HPC area of artificial intelligence and deep learning.

#### ● Advanced Package

TSMC offers a wide variety of lead-free packaging solutions for mobile/handheld devices. 10nm FinFET Si with ultra-fine pitch copper packaging was developed and qualification was successfully completed in the fourth quarter of 2016. The low-cost and large die area up to 108mm<sup>2</sup> with highly reliable 80 $\mu$ m pitch copper packaging technology will be inserted into customers' mass production from 2017 onward. In 2016, the low-cost, innovative and highly reliable fan-in WLCSP technology was completed and transferred to Fab for mass production of die size 5x5mm<sup>2</sup>. Expanding its application envelope, in addition to larger die size 7x7mm<sup>2</sup>, this technology also passed the reliability qualification for even larger die sizes up to 10x10mm<sup>2</sup>.

#### ● Advanced Interconnect

Several leading interconnect technologies were optimized and implemented in the 5nm node during 2016. Both chip performance and power utilization were effectively enhanced. These state-of-the-art technologies included an innovative integrated low-cost patterning process with the extension of immersion lithography and cutting-edge EUV patterning

technology, optimized metal layer stacking combinations, and a novel thin copper barrier process with prominent reliabilities. In addition TSMC deployed experienced experts and relevant resources to develop technology nodes of 3nm and beyond.

#### Advanced Transistor Research

Innovation in transistor architectures and materials has enabled increased speed and reduction of power consumption in advanced logic technologies. TSMC is at the forefront of transistor research on devices with high mobility channel materials for beyond Silicon CMOS. Complementing this research are further efforts focusing on innovative solutions to address challenges to technology performance from parasitic resistances and capacitances. TSMC research is expected to pave the way for continued density scaling while maximizing performance and minimizing power on advanced logic technologies for mobile and high-performance applications.

#### Specialty Technologies

TSMC offers a broad mix of technologies to address a wide range of applications:

#### ● Mixed Signal/Radio Frequency (MS/RF) Technology

In 2016, TSMC developed a 7nm silicon, electromagnetic simulation-based design to facilitate high-speed circuit design with layout specifications. To meet growing demand for low-power consumption and leakage current in mobile devices, TSMC also introduced 16FF RF technology, e.g. for 4G LTE applications. In order to improve performance regarding insertion loss and isolation, TSMC further reduced the key parameter Ron-Coff to ~102 fs (femtoseconds) to enable cellular/Wi-Fi RF switch applications.

#### ● Power IC/Bipolar-CMOS-DMOS (BCD) Technology

TSMC's 0.18 $\mu$ m second-generation BCD technology enabled the world's highest-performance quick charger and wireless charger in 2016. 0.18 $\mu$ m third-generation BCD technology is ramping up and will provide an even better solution with higher performance at lower cost. Targeting 5V and below mobile power management, newly developed asymmetric power switch in 0.13 $\mu$ m BCD technology will enable higher efficiency power supply for mobile devices.

#### ● Panel Drivers

TSMC completed process qualification of 40nm high-voltage 6V/25-32V low-power panel driver technology with several customer product verifications ongoing. This technology supports Super Retina display driver ICs and touch-display

driver ICs for high-end mobile phones. In addition, TSMC introduced Phase-2 with a 22% SRAM bitcell reduction as well as 8V/25-32V process technology for OLED drivers; several customers have designs in and plan to tape out in the first quarter of 2017.

#### ● Micro-electromechanical Systems (MEMS) Technology

In 2016, TSMC's modular MEMS technology was qualified for mass production of accelerometers and a pilot run of high-resolution pressure sensors. Future plans include the development of next-generation high-sensitivity thin microphone, MEMS Si-pillar TSV (through silicon via) technology and BioMEMS applications.

#### ● GaN Technology

In 2016, 650V D-MISFET, 100V E-HEMT, and RF 30V D-MISFET GaN devices were developed and qualified for manufacturing.

#### ● Complementary Metal-Oxide-Semiconductor (CMOS) Image Sensor Technology

In 2016, CMOS image sensor technology made the following breakthroughs: (1) high-density wafer hybrid bond technology; (2) second-generation wafer backside trench isolation for pixels; and (3) composite metal grid structure for SNR (signal-to-noise ratio) per pixel improvement. The first breakthrough achieved the world's most advanced pitch density. The second and third breakthroughs reduced per-pixel electrical and optical cross-talk for better image quality compared to previous generations of optical structures. All three technologies passed product and process qualification and are progressing toward mass production.

#### ● Flash/Embedded Flash Technology

TSMC achieved several important milestones in embedded flash technologies in 2016. At the more mature 65nm/55nm node, NOR-based cell technologies, including 1-T cell and Split-Gate cell, were successfully put in production. At the 40nm node, split-gate cell technology completed qualification for consumer electronics applications such as IoT and smartcards, and also completed customer product qualification were put in production. This technology will be adopted for automobile electronics, the development is undergoing. Embedded flash development on the 28nm low-power and 28nm high-performance mobile computing platforms is underway for low-leakage applications in areas such as automobile electronics and micro controller units (MCU).



### 5.2.3 Technology Platform

TSMC provides customers with advanced technology platforms that include the comprehensive design infrastructure required to optimize design productivity and cycle time. These include: design flows for electronic design automation (EDA); silicon-proven IP building blocks, such as libraries; and simulation and verification design kits, i.e., process design kits (PDK) and technology files.

The availability of 7nm FinFET saw improvements in design infrastructure using an advanced CPU core as the vehicle to support customers' adoption of 7nm FinFET. (EDA tool certification results can be found on TSMC-Online.) TSMC also extended its IP quality program (TSMC 9000) to allow IP audits to be performed either at TSMC or at TSMC-certified laboratories. To help customers plan new product tape-outs incorporating IP/Library from TSMC's Open Innovation Platform® (OIP) ecosystem, the OIP ecosystem added a portal to connect customers to an ecosystem of 43 solution providers.

### 5.2.4 Design Enablement

TSMC's technology platforms provide a solid foundation to facilitate the design process. Customers can design directly using the Company's internally developed IP and tools or using those that are available from TSMC's OIP partners.

### Tech Files and PDKs

TSMC provides a broad range of process design kits (PDKs) for digital logic, mixed-signal, radio frequency (RF), high-voltage driver, CMOS image sensor (CIS) and embedded flash technologies across a range of technology nodes from 0.5µm to 7nm. In addition, the Company provides technology files for DRC (design rule checking), LVS (layout verification of schematic), RC (resistance-capacitance) extraction, automatic place and route, and a layout editor to ensure process technology information is accurately represented in EDA (electronic design automation) tools. By 2016, TSMC had provided more than 8,200 technology files and more than 270 PDKs via TSMC-Online. There are more than 100,000 customer downloads of these files every year.

### Library and IP

TSMC and its alliance partners offer customers a rich portfolio of reusable IPs, which are essential building blocks for many circuit designs. In 2016, over 60% of new tape-outs at TSMC

adopted one or more libraries or IP from TSMC and/or OIP partners, as the Company expanded its library and silicon IP portfolio to contain more than 12,000 items, a 20% increase over 2015.

### Design Methodology and Flow

In 2016 TSMC addressed critical design challenges associated with the new 7nm FinFET technology for digital and SoC applications by announcing the readiness of reference flows through OIP collaboration that feature FinFET-specific design solutions and methodologies for performance, power and area optimization.

### 5.2.5 Intellectual Property

A strong portfolio of intellectual property rights strengthens TSMC's technology leadership and protects our advanced and leading edge technologies. In 2016, TSMC received a total of 2,294 U.S. patents, which is a 30% increase from the previous year, and thus reached a historical-high ranking of #9 in terms of U.S. patent grants. Additionally, TSMC received over 1,200 issued patents in Taiwan and PRC, which is a 59% increase from the previous year, as well as patents in other various countries. TSMC's patent portfolio now reaches over 35,000 patents worldwide (including patent applications in queue). We continue to implement a unified strategic plan for TSMC's intellectual capital management. Strategic considerations and close alignment with the business objectives drive the timely creation, management and use of our intellectual property.

At TSMC, we have built a process to extract value from our intellectual property by aligning our intellectual property strategy with our R&D, operations, business objectives, marketing, and corporate development strategies. Intellectual property rights protect our freedom to operate, enhance our competitive position, and give us leverage to participate in many profit-generating activities.

We have worked continuously to improve the quality of our intellectual property portfolio and to reduce the costs of maintaining it. We plan to continue investing in our intellectual property portfolio and intellectual property management system to ensure that we protect our technology leadership and receive maximum business value from our intellectual property rights.

### 5.2.6 TSMC University Collaboration Programs

In recent years, TSMC has significantly expanded its interaction with universities in Taiwan with the collaboration of research projects at some of the nation's most prestigious institutions. The mission of these projects is twofold: to increase the number of highly qualified students suitable for employment in semiconductor industry, and to inspire university professors to initiate research programs that focus on the frontiers of semiconductor science, including device, process and materials technology, semiconductor manufacturing and engineering science, and specialty technologies for electronic applications. Since 2013, TSMC has established four research centers at National Taiwan University, National Chiao Tung University, National Cheng Kung University and National Tsing Hua University. In 2015, TSMC started cooperation with International College of the Semiconductor Technology and continued to enhance cooperation with other schools. Currently, several hundred high-caliber students have joined the research centers with backgrounds in the disciplines of electronics, physics, materials engineering, chemistry, chemical engineering and mechanical engineering.

In addition, TSMC also conducts strategic research projects at top overseas universities, such as Stanford, MIT, UC Berkeley and so on. The focus is on disruptive capabilities in transistors, interconnect, patterning, modeling and special technologies.

### TSMC University Shuttle Program

The TSMC University Shuttle Program was established to provide professors at leading research universities worldwide with access to the advanced silicon process technologies needed to research and develop innovative circuit design concepts. This program links motivated professors and graduate students to enthusiastic managers at TSMC with the goals of promoting excellence in the development of advanced silicon design technologies and nurturing new generations of engineering talent in the semiconductor field.

The program provides access to TSMC silicon process technologies for digital, analog/mixed-signal circuits, RF designs and micro-electromechanical system designs. Participants in the TSMC University Shuttle Program include major university research groups worldwide. TSMC and the University Shuttle Program participants achieve "win-win" collaboration

through the program, which allows graduate students to implement exciting designs and achieve silicon proof points for innovations in various end-applications.

### 5.2.7 Future R&D Plans

To maintain and strengthen TSMC's technology leadership, the Company plans to continue investing heavily in R&D. In addition to 7nm and 5nm CMOS nodes already in the pipeline, the Company's reinforced exploratory R&D work is on track to establish a solid foundation to feed into technology platforms beyond the 5nm node. The Company's exploratory work focuses on new transistors and technologies, such as 3D structures, strain-engineered CMOS, high-mobility materials and novel 3D IC devices. These studies emphasize innovation and are guided by deep understanding of the fundamental physics of nanometer CMOS transistors and related technologies. The Company also continues to collaborate with external research bodies from academia and industry consortia alike with the goal of extending Moore's Law and paving the road to future cost-effective technologies and manufacturing solutions for its customers.

With a highly competent and dedicated R&D team and its unwavering commitment to innovation, TSMC is confident in its ability to deliver the best and most cost-effective SoC technologies to its customers and to drive future business growth and profitability for years to come.

### Summary of TSMC's Major Future R&D Projects

Project Name	Description	Risk Production (Estimated Target Schedule)
7nm logic platform technology and applications	4th generation FinFET CMOS platform technology for SoC	2017
5nm logic platform technology and applications	5th generation FinFET CMOS platform technology for SoC	2019
3D IC	Cost-effective solution with better form factor and performance for System-in-Package (SiP)	2016 ~ 2017
Next-generation lithography	EUV lithography and related patterning technology to extend Moore's Law	2016 ~ 2019
Long-term research	Specialty SoC technology (including new NVM, MEMS, RF, analog) and transistors for 5nm node and beyond	2015 ~ 2019

The projects above account for roughly 70% of the total R&D budget for 2017, estimated to be around 8% of 2017 revenue.

## 5.3 Manufacturing Excellence

### 5.3.1 GIGAFAB® Facilities

Maintaining dependable capacity is a key part of TSMC's manufacturing strategy. The Company currently operates three 12-inch GIGAFAB® facilities – Fab 12, Fab 14, and Fab 15. The combined capacity of the three facilities exceeded six million 12-inch wafers in 2016. Production within these three facilities supports 0.13μm, 90nm, 65nm, 40nm, 28nm, 20nm, 16nm, and 10nm process technologies, including each technology's sub-nodes. An additional portion of the capacity is reserved for R&D work on leading-edge manufacturing technologies, which currently supports the technology development of the 7nm node and beyond.

TSMC has developed a centralized fab manufacturing management system, super manufacturing platform (SMP), to provide customers with greater benefits in the form of more consistent quality and reliability, improved flexibility to cope with demand fluctuations, faster yield learning and time-to-volume, and lower-cost product requalification.

### 5.3.2 Engineering Performance Optimization

As advanced technology continues to evolve, the geometry keeps shrinking and the need for tighter process control have become extremely challenging for manufacturing. TSMC's unique manufacturing infrastructure is tailored with tightened process control and diversified product portfolio to fulfill higher product performance requirements. To achieve overall optimization of equipment, process and yield, the process control and analysis systems have been integrated with many intelligent functions to perform self-diagnosis and self-reacting, which have remarkable results in yield enhancement, workflow improvement, fault detection, cost reduction and R&D cycle decrement.

TSMC has developed Precise Fault Detection and Classification system, Intelligent Advanced Equipment Control and Intelligent Advanced Process Control to monitor the manufacturing process in a timely manner and adjust conditions precisely. To satisfy advanced and accurate process control and ensure highly efficient and effective production, the Company has

created Precision Equipment Matching and Yield Mining to minimize process variation and potential yield loss. The Company has further developed Big Data, Machine Learning, and Artificial Intelligence architecture to identify critical variables to optimize yield management and operating efficiency to fulfill customers' special process requirements and to cope with diversified product demand simultaneously.

### 5.3.3 Agile and Intelligent Operations

TSMC continues to drive manufacturing excellence through agile and intelligent operations. The Company's sophisticated agile operation system has integrated demand and capacity modeling, lean WIP (Work in Process) line management, and lot dispatching and scheduling, and on time delivery system to provide short cycle time, stable manufacturing and on-time delivery. The system also provides great flexibility to quickly support customers' urgent pull-in requests when needed.

TSMC has also introduced new applications such as IoT devices, intelligent mobile devices, and mobile robots that help to consolidate data collection, yield traceability, workflow efficiency, and material transportation to continuously enhance fab operating efficiency.

Following its commitment to manufacturing excellence, TSMC has integrated the technology of advanced data analysis, smart diagnostics, self-reactive, precise forecasting and operational knowledge to revolutionize the fab operating mode from "Auto" to "Intelligent," to optimize efficiency, flexibility and quality while maximizing cost effectiveness and accelerating overall innovation.

### 5.3.4 Raw Materials and Supply Chain Management

In 2016, TSMC continued to hold review meetings periodically with teams from operations, quality control and business to proactively identify and manage the risks of insufficient supply capacity, quality issues and supply chain interruption. TSMC also worked with suppliers to enhance performance, quality, delivery and sustainability, as well as to support green procurement, environmental protection and safety.

## Raw Materials Supply

Major Materials	Major Suppliers	Market Status	Procurement Strategy
Raw Wafers	F.S.T. GlobalWafers S.E.H. Siltronic SUMCO	These five suppliers together provide over 90% of the world's raw wafer supply.  Each supplier has multiple manufacturing sites in order to meet customer demand, including plants in North America, Asia, and Europe.	<ul style="list-style-type: none"> <li>TSMC's suppliers of silicon wafers are required to pass stringent quality certification procedures.</li> <li>TSMC procures wafers from multiple sources to ensure adequate supplies for volume manufacturing and to appropriately manage supply risk.</li> <li>Raw wafer quality enhancement programs are in place to meet TSMC's technology advancement.</li> <li>TSMC regularly reviews the quality, delivery, cost, sustainability and service performance of its wafer suppliers. The results of these reviews are incorporated into TSMC's subsequent purchasing decisions.</li> <li>A periodic audit of each wafer supplier's quality assurance system ensures that TSMC can maintain the highest quality in its own products.</li> </ul>
Chemicals	Air Liquide BASF Entegris Hong-Kuang Kanto PPC Merck Versum Wah Lee	These eight companies are the major worldwide suppliers of chemicals.	<ul style="list-style-type: none"> <li>Most suppliers have relocated some of their operations closer to TSMC's major manufacturing facilities, thereby significantly improving procurement logistics.</li> <li>All supplied products are regularly reviewed to ensure that TSMC's specifications are met and product quality is satisfactory.</li> </ul>
Lithographic Materials	3M Hitachi JSR Nissan Shin-Etsu Chemical Sumitomo T.O.K.	These seven companies are the major worldwide suppliers of lithographic materials.	<ul style="list-style-type: none"> <li>TSMC works closely with its suppliers to develop materials that meet all application and cost requirements.</li> <li>TSMC and suppliers periodically conduct programs to improve their quality, delivery, sustainability and green policy, and to ensure continuous progress of TSMC's supply chain.</li> <li>Some major suppliers have relocated or plan to replicate their manufacturing sites closer to TSMC's major manufacturing facilities, thereby significantly improving procurement logistics and reducing supply risks.</li> </ul>
Gases	Air Liquide Air Products Entegris Linde LienHwa SK Materials Taiyo Nippon Sanso Versum	These seven companies are the major worldwide suppliers of specialty gases.	<ul style="list-style-type: none"> <li>The majority of the seven suppliers have facilities in multiple geographic locations, which minimizes supply risk for TSMC.</li> <li>TSMC conducts periodic audits to ensure that they meet TSMC's standards.</li> </ul>
Slurry, Pad, Disk	3M Asahi Glass Cabot Microelectronics Dow Chemical Fujifilm Planar Solutions Fujimi Kinik Sumitomo Versum	These nine companies are the major worldwide suppliers of CMP (Chemical Mechanical Polishing) materials.	<ul style="list-style-type: none"> <li>TSMC works closely with its suppliers to develop materials that meet all application and cost requirements.</li> <li>TSMC and suppliers periodically conduct programs to improve their quality, delivery, sustainability and green policy, and to ensure continuous progress of TSMC's supply chain.</li> <li>Most suppliers have relocated or plan to replicate their manufacturing sites closer to TSMC's major manufacturing facilities, thereby significantly improving procurement logistics and reducing supply risks.</li> </ul>

## Suppliers Accounted for at Least 10% of Annual Consolidated Net Procurement

Unit: NT\$ thousands

Supplier	2016			2015		
	Procurement Amount	As % of 2016 Total Net Procurement	Relation to TSMC	Procurement Amount	As % of 2015 Total Net Procurement	Relation to TSMC
Company A	9,140,880	17%	None	7,981,126	15%	None
Company B	7,065,392	14%	None	6,452,073	12%	None
VIS	6,732,297	13%	Investee accounted for using equity method	7,148,777	13%	Investee accounted for using equity method
Company C	5,527,526	11%	None	4,579,937	9%	None
Company D	1,314,335	2%	None	5,457,120	10%	None
Others	22,403,613	43%		22,080,628	41%	
Total Net Procurement	52,184,043	100%		53,699,661	100%	

### 5.3.5 Quality and Reliability

TSMC's strong industry reputation stems from its commitment to provide customers with the highest-quality wafers and best service for their products. Quality and Reliability (Q&R) services aim to achieve "quality on demand" to fulfill customers' needs for time-to-market delivery, reliable quality, and market competitiveness over a broad range of products.

Q&R technical services assist customers in the technology developmental stages and product design stages to design in superior product reliability. In 2016, Q&R has worked with R&D to successfully qualify leading edge 10nm technology (the second FinFET generation) and characterize process window with Fab for mass production in 2017. For specialty technologies, ultra-low-power embedded Flash IP, stacked CMOS image sensor and ultra-high voltage GaN device also passed the qualifications and ready for production. For InFO assembly technology, Q&R worked with R&D to integrate AP (Application Processor) with IPD (Integrated Passive Device) and passed both component level and board level qualifications. With the implementation of fully automated production and process monitor data output same as Fab's quality management system, InFO technology enabled TSMC customers to introduce new products with excellent and stable production quality in 2016. Over 100 million InFO devices have been shipped to key customers without major quality or reliability issue.

For leading edge technology qualification and production ramp, Q&R developed accelerated test screening by voltage and temperature to speed up reliability failure improvement and set up the associated in-line process monitor and control. To cope with fast growing demand and increasing challenge in specialty technology, Q&R and Fab has worked together to ensure robust qualification process and production ramp. To reduce quality incidents that affect customers, Q&R and Fab also collaborated to develop a comprehensive tool and process defense system to early detect and contain issues within Fab and thus improve overall customer satisfaction.

To enhance employees' problem solving capabilities and develop associated quality system and methodology, Q&R continued to hold several company-wide symposiums and training programs such as TQE (Total Quality Excellence), DOE (Design of Experiment), SPC (Statistical Process Control) and metrology in 2016 including the promotion and training of Deep/Machine Learning. Q&R will continue the development of employees' capabilities by using new methodology to enhance TSMC competitiveness.

For incoming material quality improvement in 2016, Q&R developed and implemented 6 new quality systems and also inquired material suppliers to participate in the "National Quality Control Circle Competition" to enhance their self-improvement capabilities. For outgoing quality control, Q&R implemented auto-packing machine to eliminate manual handing and enhance InFO package quality assurance.

Failure analysis and material and chemical studies play important roles in TSMC's quality control. These capabilities are applied from the early stages of process development through assembly and packaging, including analysis of incoming materials, airborne molecular contaminants, in-depth materials characterization, and failure analysis for process development and failure analysis of customer returns. In 2016, TSMC invested aggressively in automation for transmission electron microscopy (TEM) sample preparation and imaging, which resulted in further improvement in TSMC world-class cycle times and capacity in the area. The Company also strengthened its ties with the nearby National Synchrotron Radiation Research Center to analyze advanced materials. In collaboration with customers and suppliers, TSMC continued to make significant progress in fault isolation. In particular, TSMC added the ability to remove material layer by layer for failure analysis with nanometer level accuracy. Given the changing needs of our customers and the importance of ensuring the quality of incoming chemicals and materials, in 2016, TSMC launched a laboratory to analyze precursor gases used in atomic layer deposition (ALD). With a growing presence in the IC packaging area, Q&R also bolstered failure analysis capabilities for multi-chip packages including InFO packages. These efforts will continue in 2017.

Q&R is also responsible for leading the Company toward the ultimate goal of zero-defect production through the use of continuous improvement programs. Periodic customer feedback indicates that products shipped from TSMC have consistently met or exceeded their field quality and reliability requirements. In 2016, a third-party audit verified the effectiveness of TSMC quality management systems in compliance with ISO/TS 16949: 2009 and IECQ QC 080000: 2012 certificates requirements.

## 5.4 Customer Trust

### 5.4.1 Customers

TSMC's customers worldwide have a variety of successful product specialties and excellent performance records in various segments of the semiconductor industry. Customers include fabless semiconductor companies, systems companies, and integrated device manufacturers such as Advanced Micro Devices, Inc., Broadcom Limited, Huawei Tech, Intel Corporation, MediaTek Inc., NVIDIA Corporation, NXP Semiconductors N.V., OmniVision Technologies, Inc., Qualcomm Inc., Sony Corporation, Spreadtrum Communications, Inc., Texas Instruments Inc., and many more.

#### Customer Service

TSMC believes that providing superior service is critical to enhancing customer satisfaction and loyalty, which, in turn, is very important to retaining existing customers, strengthening customer relationships and attracting new customers. With a dedicated customer service team as the main contact for coordination and facilitation, TSMC strives to provide world-class design support, mask making, wafer manufacturing, and backend services to provide customers an optimum experience and, in return, gain customer trust and sustain company profitability.

To facilitate customer interaction and information access on a real-time basis, TSMC-Online offers a suite of web-based applications that play an active role in design, engineering and logistics collaborations. Customers have 24/7 access to critical information and customized reports. Design collaboration focuses on content availability and accessibility, with close attention paid to complete, accurate and current information at each stage of the design life cycle. Engineering collaboration includes online access to engineering lots, wafer yields, wafer acceptance test (WAT) analysis, and quality and reliability data. Logistics collaboration provides access to data on any given order status in wafer fabrication, backend process and shipping.

#### Customer Satisfaction

To measure customer satisfaction and to ensure that our customer needs are appropriately understood, TSMC conducts an annual customer satisfaction survey (ACSS) with most active customers, either by web or interview through an independent consultancy.



Complementary to the survey, quarterly business reviews (QBRs) are also conducted by the customer service team so that customers can give feedback to TSMC on a regular basis. Through surveys, feedback reviews and intensive interaction with customers, TSMC is able to maintain close touch for better service and collaboration.

Customer feedback is routinely reviewed, analyzed and then used to develop appropriate improvement plans, all in all becoming an integral part of the customer satisfaction process with a complete closed loop. TSMC uses data derived from the survey as a base to identify future focus areas. TSMC acts on the belief that customer satisfaction leads to loyalty, and customer loyalty leads to higher levels of retention and expansion.

#### Customers that Accounted for at Least 10% of Annual Consolidated Net Revenue

Unit: NT\$ thousands

Customer	2016			2015		
	Net Revenue	As % of 2016 Total Net Revenue	Relation to TSMC	Net Revenue	As % of 2015 Total Net Revenue	Relation to TSMC
Customer A	157,185,418	17%	None	134,117,206	16%	None
Customer B	107,463,238	11%	None	134,158,421	16%	None
Others	683,289,688	72%		575,221,741	68%	
Total Net Revenue	947,938,344	100%		843,497,368	100%	

#### 5.4.2 Open Innovation Platform® (OIP) Initiative

Innovation has always been both an exciting proposition and a challenge. Competition among semiconductor companies is growing more intense in the face of increasing customer consolidation and the commoditization of technology at more mature, conventional levels. Companies must find ways to continue innovating in order to survive and prosper. One way to accelerate innovation is through active collaboration with external partners. At TSMC this is known as the “Open Innovation®” approach. It is an “outside in” approach to complement traditional “inside out” methods. TSMC has adopted this path to innovate via its Open Innovation Platform® (OIP) initiative, which is a key part of the TSMC Grand Alliance.

The OIP initiative is a comprehensive design technology infrastructure that encompasses all critical IC implementation areas to reduce design barriers and improve first-time silicon success. OIP promotes the speedy implementation of innovation amongst the semiconductor design community and its ecosystem partners with TSMC’s IP, design implementation and DFM (design for manufacturability) capabilities, process technology and backend services.

Crucial to OIP are ecosystem interfaces and collaborative components initiated and supported by TSMC that more efficiently empower innovation throughout the supply chain and, in turn, drive the creation and sharing of new revenue and profits. TSMC’s active accuracy assurance (AAA) initiative is key to OIP, providing the accuracy and quality required by the ecosystem interfaces and collaborative components.

TSMC’s Open Innovation® model brings together the creative thinking of customers and partners under the common goal of shortening each of the following: design time, time-to-volume, time-to-market and, ultimately, time-to-revenue. The model features:

- The foundry segment’s earliest and most comprehensive EDA (electronic design automation) certification program, delivering timely design tool enhancement required by new process technologies;
- The foundry segment’s largest, most comprehensive and robust silicon-proven IP (intellectual properties) and library portfolio; and
- Comprehensive design ecosystem alliance programs covering market-leading EDA, library, IPs, and design service partners.

TSMC’s OIP alliance consists of 23 EDA partners, 43 IP partners, and 25 design service partners. TSMC and its partners work together proactively and engage much earlier and deeper than before in order to address mounting design challenges at advanced technology nodes. Through this early and intensive collaboration effort, TSMC’s OIP is able to deliver the needed design infrastructure with timely enhancement of EDA tools, early availability of critical IPs and quality design services when customers need them. Taking full advantage of the process technologies once they reach production-ready maturity is critical to customers’ success.

In September 2016, TSMC hosted an OIP ecosystem forum at the San Jose Convention Center in California, and another in October in Beijing, with keynote addresses from OIP ecosystem partners as well as TSMC executives. The forum was well attended by both customers and ecosystem partners and demonstrated the value of collaboration through OIP to nurture innovation.

TSMC’s OIP partner management portal facilitates communication with our ecosystem partners for efficient business productivity. Designed with a highly intuitive interface, this portal can be accessed via a direct link from TSMC-Online.

#### 5.5 Human Capital

Human capital is one of TSMC’s most important assets.

The Company is committed to providing quality jobs with good compensation, meaningful work, and a safe work environment for its employees. Moreover, TSMC is dedicated to fostering a dynamic, effective work environment.

Based on the commitment to employees, TSMC believes that all employees should be treated with dignity and respect. In the aspect of upholding international proclaimed human rights, TSMC has initiated and implemented “TSMC Human Rights Policy” based on “A Guide for Business – How to Develop a Human Rights Policy” and is also compliance with “the International Bill of Human Rights,” “The International Labour Organization’s (ILO) Declaration on Fundamental Principles and Rights at Work” and “the United Nations Global Compact’s Ten Principles”. In addition, TSMC participates in the Electronic Industry Citizenship Coalition (EICC) as a full member.

#### 5.5.1 Workforce Structure

At the end of 2016, TSMC had over 46,968 employees worldwide, including 4,909 managers, 20,719 professionals, 3,934 assistants, and 17,406 technicians. The following table summarizes TSMC’s workforce as of the end of February, 2017:

		2015/12/31 (Note)	2016/12/31	2017/02/28
Job	Managers	4,669	4,909	4,934
	Professionals	19,645	20,719	20,972
	Assistant Engineer/Clerical	3,789	3,934	3,993
	Technician	17,169	17,406	17,443
Total		45,272	46,968	47,342
Gender	Male (%)	58.7%	59.9%	60.1%
	Female (%)	41.3%	40.1%	39.9%
Education	Ph.D.	4.4%	4.5%	4.5%
	Master’s	39.2%	40.3%	40.5%
	Bachelor’s	26.2%	26.7%	26.8%
	Other Higher Education	12.2%	11.6%	11.5%
	High School	18.0%	16.9%	16.7%
Average Age (years)		34.6	35.2	35.2
Average Years of Service (years)		7.5	7.9	8.0

Note: The data shown no longer include TSMC Solid State Lighting, which was sold in 2015. In addition, TSMC Solar ceased manufacturing operations in August 2015 and was merged into TSMC in December 2015.

#### 5.5.2 Recruitment

TSMC’s growth depends on the continued contributions of its dedicated employees. In order to strengthen growth momentum, the Company is dedicated to recruiting top-notch professionals for all positions available. TSMC is an equal employment opportunity employer and operates on the principles of open-and-fair recruitment. The Company evaluates all candidates according to their qualifications as related to the requirement of each position without regard to race, gender, age, religion, nationality or political affiliation.

TSMC’s continuous growth requires constant talent sourcing and recruitment activities to support its business. The Company recruited over 3,400 employees in 2016, including over 2,300 managers and professionals, as well as over 1,100 assistants and technicians.

### 5.5.3 People Development

Employee development is an integral and critical factor for the growth of a company and should be goal oriented, disciplined and planned. TSMC is committed to cultivating a consistent and diverse learning environment. To this end, the Company has initiated the “TSMC Employee Training and Education Procedure” to ensure the Company’s and the individuals’ development objectives can be achieved through the integration of internal and external training resources.

An individual development plan (IDP) is drawn up based on the nature of the individual’s job, work performance and career development path. At the same time, TSMC also actively develops talent and creates a high-performance work environment through development programs based on business objectives. The Company not only provides employees a diverse network of learning resources, including on-the-job training, classroom training, e-learning, coaching, mentoring and job rotation, but also creates a learning atmosphere through learning enablement activities in response to organization development requirements and employee capability enhancement needs.

The Company provides employees with a wide range of onsite general, professional and management training programs systematically. In addition to engaging external experts as trainers, hundreds of TSMC employees are trained to be qualified instructors to deliver their valuable knowhow in internal training courses.

TSMC’s training programs include:

- New employee training: includes basic training and job orientation for new employees. Furthermore, newcomers’ managers and the Company’s well-established buddy system are in place to support new hires in their assimilation process in both corporate culture and work requirements.
- General training: refers to training required by government regulations and/or Company policies, as well as training on general subjects for all employees or employees of different job functions. Topics include industry-specific safety, workplace health and safety, quality, fab emergency response, languages and personal effectiveness.

- Professional/functional training: technical and professional training required by different functions within the Company. TSMC offers training courses on equipment engineering, process engineering, accounting, information technology, and so forth.
- Management training: programs are tailored to the needs of managers at all levels, including new, experienced, and senior managers; optional courses are also available.
- Direct labor training: enables production line employees to acquire the knowledge, skills and attitudes they need to perform their jobs well and to pass the certification for operating equipment. Includes direct labor skill training, technician “Train the Trainer” training, and manufacturing leader training.
- Customized training: programs are tailored to the needs of the organization and/or the people development plan.

In 2016, TSMC conducted 1,228 internal training sessions, which translated to a companywide total of 623,711 training hours with the participation of 450,756 attendees. Employees on average attended over 13 hours of training with total training expenses reaching NT\$75,401,157.

Apart from internal training resources, our employees are also subsidized when pursuing external short-term courses, for-credit courses and degrees.

### 5.5.4 Compensation

TSMC provides a diversified compensation program that is competitive externally, fair internally, and adapted locally. TSMC adheres to the philosophy of sharing wealth with employees in order to attract, retain, develop, motivate and reward talented employees. With excellent operating performance, employment at TSMC entitles employees to a comprehensive compensation and benefits program above the industry average.

TSMC’s compensation program includes a monthly salary, employees’ cash bonus based on quarterly business results, and an employee profit sharing bonus based on annual profit.

The purpose of the employee cash bonus and profit sharing bonus programs is to reward employee contributions appropriately, to encourage employees to work consistently toward ensuring the success of TSMC, and to align employees’ interests with those of TSMC’s shareholders. The Company determines the amount of the cash bonus and employees’ compensation based on operating results and industry practice in the Republic of China. The amount and form of the employee cash bonus and employees’ profit sharing bonus are recommended by the compensation committee to the board. In addition, the profit sharing bonus is distributed upon the approval of the board of directors. Individual awards are based on each employee’s job responsibility, contribution and performance.

In addition to providing employees of TSMC’s overseas subsidiaries with a locally competitive base salary, the Company grants annual bonuses as a part of total compensation. The annual bonuses are granted in line with local regulations, market practices, and the overall operating performance of each subsidiary, to encourage employee commitment and development within the Company.

### 5.5.5 Employee Engagement

Both local labor laws in each operation location and the fundamental conventions of International Labour Organization prohibit all forms of forced or compulsory labor. TSMC stands firmly with these protocols and has never forced labor from involuntary persons or menaced them with any penalty.

The Company encourages employees to maintain a healthy and well-balanced life while accomplishing their missions effectively. TSMC continuously implements programs to enhance employee communication, well-being, benefit, rewards and recognition. The various initiatives include the following programs:

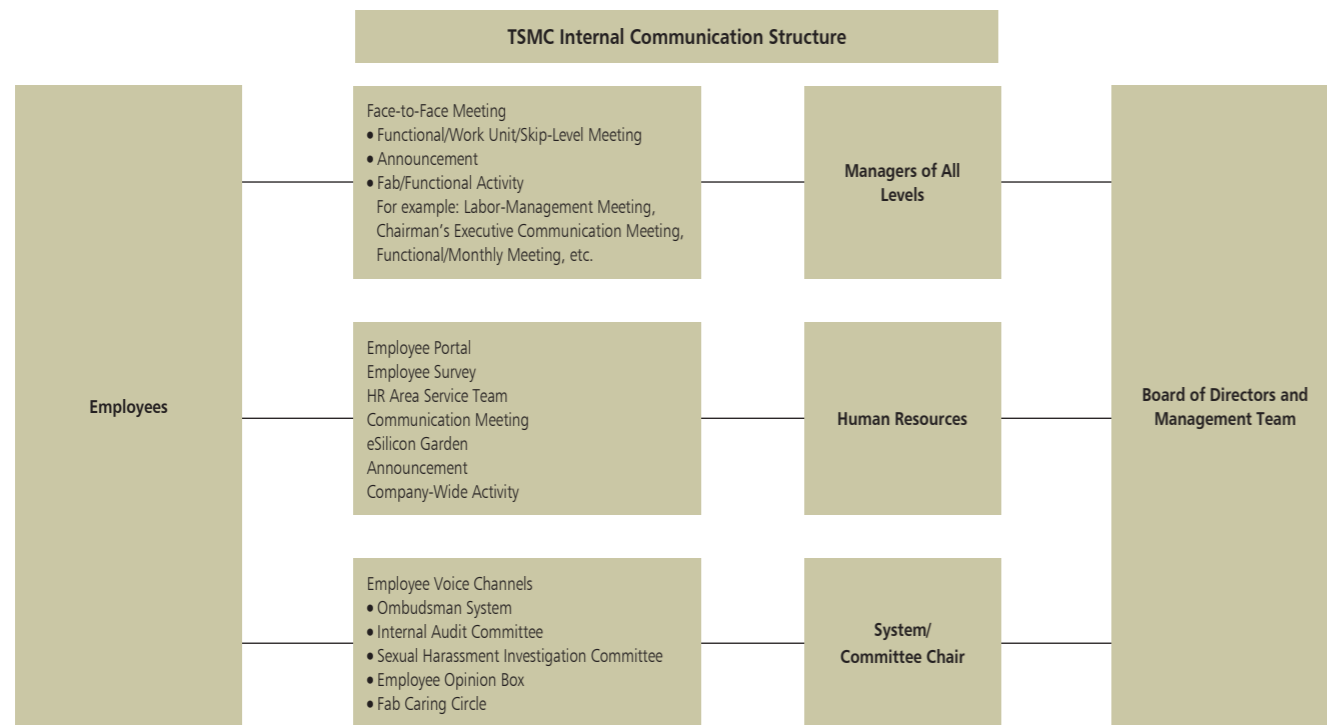
#### Employee Communication

TSMC values two-way communication and is committed to keeping communication channels among management levels, subordinates and peers open and transparent. To ensure that employees’ opinions and voices are heard and their issues

are addressed effectively, impartial submission mechanisms, including quarterly labor-management communication meetings, are in place to provide timely support. TSMC makes continuous efforts to facilitate mutual and timely employee communication, based on multiple channels and platforms, which in turn fosters harmonious labor relations and creates a win-win situation for the Company and employees.

A host of two-way communication channels are constructed to maintain the free flow of information between managers and employees, including:

- Communication meetings for various levels of managers and employees.
- Periodic employee satisfaction surveys, with follow-up actions based on the survey findings.
- The employee portal, *myTSMC*, an internal website featuring the Chairman’s talk, corporate messages, executive interviews, and other activities of interest to employees.
- *eSilicon Garden*, a website hosting TSMC’s internal electronic publications providing real-time updates on major activities of the Company, as well as inspirational content featuring outstanding teams and individuals.
- The Whistleblower Reporting System owned by Audit Committee and the Ombudsman system led by an appointed vice president – two distinct channels, each with a strict confidentiality – to handle complaints regarding major management, financial, auditing, ethics and business conduct issues.
- The employee opinion box provides an opportunity for employees to submit suggestions or opinions regarding their work and the overall work environment.
- The Fab Caring Circle in each fab addresses the issues related to employees’ work and personal life; the system is dedicated mainly to the Company’s direct labor workers.



Core values are the foundation of the Company. As part of our practice on “Integrity,” means, among other things, that TSMC abides by the law and goes above and beyond to act in accordance with the spirit of the law. “Commitment” entails providing employees with meaningful jobs, a safe working environment and competitive compensation and benefits. Under this premise, TSMC respects employees’ rights entitled by global labor standards and local regulations, including the UN Global Compact’s Ten Principles and Taiwan’s Labor Union Act. In addition, as a member of the Electronic Industry Citizenship Coalition (EICC), TSMC adopts the EICC Code of Conduct ([http://www.tsmc.com/english/csr/eicc\\_membership.htm](http://www.tsmc.com/english/csr/eicc_membership.htm)) and does not impede employees’ freedom of association. The principle and regulation above not only align with TSMC’s goal, but also provide practical standards and measurement of implementation, which support the Company’s continuous enhancement.

The relationship between TSMC management and employees has been harmonious over the years; internal communication channels are transparent and effective. The Company respects for employees’ right of forming a labor union, however, no employees have pursued this avenue or issued a request to form one so far.

In 2016 and as of the date of this annual report, there have been no losses resulting from labor disputes.

#### Employee Benefit Programs

- Convenient onsite services: cafeterias, laundry services, convenience stores, travel, banking, and commuting assistance are accessible for employees in the fabs.
- Comprehensive health enhancement and management programs: health enhancement programs include weight control, in-fab clinic and dentist services, smoking cessation, massage service, cancer screening activity, blood donation, as well as monthly seminars to raise personal health awareness. Health management programs include post health-exam follow-up activities for abnormal cases, prevention of cerebrovascular disease, ergonomic hazards management, and maternal care and protection. Employee assistance programs include five free annual counseling sessions for mental health and financial/legal issues, with extensions available depending on the individual’s needs.

- Diverse employee welfare programs: including 80 hobby clubs, 70 speeches covering various topics, Sports Day, and Family Day. In addition, holiday bonuses, marriage bonuses, condolence allowances and emergency subsidies are also available to address employees’ needs.
- Premium sports centers: a variety of workout facilities available to all employees and their families, as well as exercise sessions conducted by professional instructors to improve employee wellness.
- Flexible preschool service: childcare service, operated to meet employees’ work schedules, is available in three fabs in Hsinchu and Tainan.

#### Employee Recognition

TSMC sponsors various internal award programs to recognize outstanding achievements by employees, both individual and at a team level. With these award programs, TSMC aims to encourage continued employee development, which, in turn, adds to the Company’s competitive advantage.

TSMC’s award programs include:

- Medal of Honor: recognizes those who contribute significantly to the Company’s business performance.
- TSMC Academy: recognizes outstanding TSMC scientists and engineers whose individual technical capabilities make significant contributions to the Company.
- TSMC Excellent Labor Award: recognizes excellent TSMC technicians and group leaders whose outstanding performance make significant contributions to the Company.
- Total Quality Excellence Award for each fab: recognize employees’ continuous efforts in creating value for the Company.
- Service Award and TSMC’s appreciation of senior employees: recognize senior employees’ long-term commitment and dedication to the Company.
- Excellent Instructor Award: praises the outstanding performance and contribution of the Company’s internal instructors in training courses for employees.
- Function-wide awards dedicated to innovation, such as the Idea Forum and TQE Awards, which recognize employees’ initiative and continuous implementation of innovative practices.

Apart from corporate-wide awards, TSMC recommended employees to participate several external talent awards. In 2016, distinguished TSMC employees continued to be recognized through a host of national awards, including Outstanding Young Engineer Award, National Manager Excellence Award and National Industrial Innovation Award.

#### 5.5.6 Retention

Continuous growth is a major component of TSMC’s commitment to its stockholders and employees, and the retention of outstanding employees is crucial in fulfilling this commitment. From employee’s initial orientation and adaptation to professional and career development, TSMC works proactively to provide employees with good compensation, innovative, and meaningful work, as well as a safe work environment.

Employees’ overall satisfaction with the Company’s efforts are reflected in the 2016 TSMC Core Values Survey, of which 97% of participants agreed that they are willing to commit fully in their work to make TSMC an even more successful company; while 95% of them concurred with the statement that they are willing to contribute their talents to TSMC and grow together with the Company for the next five years.

In 2016, the Company recorded a manageable turnover rate of 4.1%.

#### 5.5.7 Retirement Policy

TSMC’s retirement policy is set according to the Labor Standards Act and Labor Pension Act of the Republic of China. With the Company’s sound financial system, TSMC ensures employees a solid pension contribution and payments, which encourages employees to set long-term career plans and further deepens their commitment to TSMC.

#### 5.6 Material Contracts

##### Research and Development Funding Agreement

##### Term of Agreement:

10/31/2012 - 12/31/2017

##### Contracting Party:

ASML Holding N.V. (ASML)

##### Summary:

TSMC shall provide EUR276 million to ASML’s research and development programs from 2013 to 2017.

Note: TSMC is not currently party to any other material contract, other than contracts entered into in the ordinary course of our business. The Company’s “Significant Contingent Liabilities and Unrecognized Commitments” are disclosed in Annual Report section (II), Financial Statements, page 75-76.



# 12.4%

2016 Consolidated Revenue totaled NT\$947.94 billion, an increase of 12.4 percent over NT\$843.50 billion in 2015.



# Financial Highlights and Analysis

## 6.1 Financial Highlights

### 6.1.1 Condensed Balance Sheet

#### Condensed Balance Sheet from 2012 to 2016 (Consolidated) (Note 1)

Unit: NT\$ thousands

Item	2012	2013	2014 (Adjusted)	2015	2016
Current Assets	250,325,436	358,486,654	626,565,639	746,743,991	817,729,126
Long-term Investments (Note 2)	65,717,240	89,183,810	30,056,279	34,993,583	46,153,916
Property, Plant and Equipment	617,562,188	792,665,913	818,198,801	853,470,392	997,777,687
Intangible Assets	10,959,569	11,490,383	13,531,510	14,065,880	14,614,846
Other Assets (Note 3)	16,790,075	11,228,217	6,696,857	8,244,452	10,179,727
Total Assets	961,354,508	1,263,054,977	1,495,049,086	1,657,518,298	1,886,455,302
Current Liabilities					
Before Distribution	148,473,947	189,777,934	201,013,629	212,228,594	318,239,273
After Distribution	226,247,254	267,563,785	317,697,110	367,810,877	(Note 4)
Noncurrent Liabilities	89,786,655	225,501,958	247,707,125	222,655,225	178,164,903
Total Liabilities					
Before Distribution	238,260,602	415,279,892	448,720,754	434,883,819	496,404,176
After Distribution	316,033,909	493,065,743	565,404,235	590,466,102	(Note 4)
Equity Attributable to Shareholders of the Parent					
Capital Stock	259,244,357	259,286,171	259,296,624	259,303,805	259,303,805
Capital Surplus	55,675,340	55,858,626	55,989,922	56,300,215	56,272,304
Retained Earnings					
Before Distribution	408,411,468	518,193,152	705,165,274	894,293,586	1,072,008,169
After Distribution	330,638,161	440,407,301	588,481,793	738,711,303	(Note 4)
Others	(2,780,485)	14,170,306	25,749,291	11,774,113	1,663,983
Equity Attributable to Shareholders of the Parent					
Before Distribution	720,550,680	847,508,255	1,046,201,111	1,221,671,719	1,389,248,261
After Distribution	642,777,373	769,722,404	929,517,630	1,066,089,436	(Note 4)
Noncontrolling Interests	2,543,226	266,830	127,221	962,760	802,865
Total Equity					
Before Distribution	723,093,906	847,775,085	1,046,328,332	1,222,634,479	1,390,051,126
After Distribution	645,320,599	769,989,234	929,644,851	1,067,052,196	(Note 4)

Note 1: 2012-2013 financial statements were prepared in accordance with 2010 Taiwan-IFRSs version, 2014-2016 financial statements were prepared in accordance with 2013 Taiwan-IFRSs version. Financial statements of 2014 were adjusted to retrospectively apply newly effected GAAP. Adjustments include a decrease of NT\$84,759 thousand in total assets, a decrease of NT\$737,344 thousand in total liabilities before distribution and an increase of NT\$652,585 thousand in total equity before distribution.

Note 2: Long-term investments consist of noncurrent available-for-sale financial assets, held-to-maturity financial assets, financial assets carried at cost and investments accounted for using equity method.

Note 3: Other assets consist of deferred income tax assets, refundable deposits, and other noncurrent assets.

Note 4: Pending for shareholders' approval.

#### Condensed Balance Sheet from 2012 to 2016 (Unconsolidated) (Note 1)

Unit: NT\$ thousands

Item	2012	2013	2014 (Adjusted)	2015	2016
Current Assets	205,819,614	257,623,763	370,949,497	426,913,080	443,781,164
Long-term Investments (Note 2)	139,634,200	165,545,159	242,395,596	326,330,737	397,290,976
Property, Plant and Equipment	586,636,036	770,443,494	796,684,361	831,784,912	979,401,337
Intangible Assets	6,449,837	7,069,456	8,996,810	9,391,418	10,047,991
Other Assets (Note 3)	13,597,966	7,897,131	3,935,389	5,265,368	6,816,676
Total Assets	952,137,653	1,208,579,003	1,422,961,653	1,599,685,515	1,837,338,144
Current Liabilities					
Before Distribution	144,528,616	187,195,744	178,261,092	194,299,278	308,177,214
After Distribution	222,301,923	264,981,595	294,944,573	349,881,561	(Note 4)
Noncurrent Liabilities	87,058,357	173,875,004	198,499,450	183,714,518	139,912,669
Total Liabilities					
Before Distribution	231,586,973	361,070,748	376,760,542	378,013,796	448,089,883
After Distribution	309,360,280	438,856,599	493,444,023	533,596,079	(Note 4)
Equity					
Capital Stock	259,244,357	259,286,171	259,296,624	259,303,805	259,303,805
Capital Surplus	55,675,340	55,858,626	55,989,922	56,300,215	56,272,304
Retained Earnings					
Before Distribution	408,411,468	518,193,152	705,165,274	894,293,586	1,072,008,169
After Distribution	330,638,161	440,407,301	588,481,793	738,711,303	(Note 4)
Others	(2,780,485)	14,170,306	25,749,291	11,774,113	1,663,983
Total Equity					
Before Distribution	720,550,680	847,508,255	1,046,201,111	1,221,671,719	1,389,248,261
After Distribution	642,777,373	769,722,404	929,517,630	1,066,089,436	(Note 4)

Note 1: 2012-2013 financial statements were prepared in accordance with 2010 Taiwan-IFRSs version, 2014-2016 financial statements were prepared in accordance with 2013 Taiwan-IFRSs version. Financial statements of 2014 were adjusted to retrospectively apply newly effected GAAP. Adjustments include a decrease of NT\$82,771 thousand in total assets, a decrease of NT\$735,381 thousand in total liabilities before distribution and an increase of NT\$652,610 thousand in total equity before distribution.

Note 2: Long-term investments consist of held-to-maturity financial assets, financial assets carried at cost and investments accounted for using equity method.

Note 3: Other assets consist of deferred income tax assets, refundable deposits, and other noncurrent assets.

Note 4: Pending for shareholders' approval.



## 6.1.2 Condensed Statement of Comprehensive Income

### Condensed Statement of Comprehensive Income from 2012 to 2016 (Consolidated) (Note 1)

Unit: NT\$ thousands (Except EPS: NT\$)

Item	2012	2013	2014 (Adjusted)	2015	2016
Net Revenue	506,745,234	597,024,197	762,806,465	843,497,368	947,938,344
Gross Profit	244,137,107	280,945,507	377,722,016	410,394,893	474,832,098
Income from Operations	181,176,868	209,429,363	295,870,309	320,047,775	377,957,778
Non-operating Income and Expenses	499,588	6,057,759	6,208,048	30,381,136	8,001,602
Income before Income Tax	181,676,456	215,487,122	302,078,357	350,428,911	385,959,380
Net Income	166,123,802	188,018,937	263,763,958	306,556,167	334,338,236
Other Comprehensive Income for the Year, Net of Income Tax	4,252,632	16,352,248	11,805,021	(14,714,182)	(11,067,189)
Total Comprehensive Income for the Year	170,376,434	204,371,185	275,568,979	291,841,985	323,271,047
Net Income (Loss) Attributable to:					
Shareholders of the Parent	166,318,286	188,146,790	263,881,771	306,573,837	334,247,180
Noncontrolling Interests	(194,484)	(127,853)	(117,813)	(17,670)	91,056
Total Comprehensive Income (Loss) Attributable to:					
Shareholders of the Parent	170,521,543	204,505,782	275,670,991	291,867,757	323,186,736
Noncontrolling Interests	(145,109)	(134,597)	(102,012)	(25,772)	84,311
Basic Earnings Per Share (Note 2)	6.42	7.26	10.18	11.82	12.89

Note 1: 2012-2013 financial statements were prepared in accordance with 2010 Taiwan-IFRSs version, 2014-2016 financial statements were prepared in accordance with 2013 Taiwan-IFRSs version. Financial statements of 2014 were adjusted to retrospectively apply newly effected GAAP. Adjustments include a decrease of NT\$12,359 thousand in gross profit, a decrease of NT\$19,984 thousand in income from operations, a decrease of NT\$16,911 thousand in net income and a decrease of NT\$46,054 thousand in total comprehensive income for the year.

Note 2: Based on weighted average shares outstanding in each year.

### Condensed Statement of Comprehensive Income from 2012 to 2016 (Unconsolidated) (Note 1)

Unit: NT\$ thousands (Except EPS: NT\$)

Item	2012	2013	2014 (Adjusted)	2015	2016
Net Revenue	500,369,525	591,087,600	757,152,389	837,046,888	936,387,291
Gross Profit	234,850,311	271,644,860	366,899,120	397,708,840	461,808,296
Income from Operations	176,820,141	204,653,892	290,640,302	313,408,698	369,730,533
Non-operating Income and Expenses	6,932,246	11,062,658	10,363,515	36,579,970	15,458,427
Income before Income Tax	183,752,387	215,716,550	301,003,817	349,988,668	385,188,960
Net Income	166,318,286	188,146,790	263,881,771	306,573,837	334,247,180
Other Comprehensive Income for the Year, Net of Income Tax	4,203,257	16,358,992	11,789,220	(14,706,080)	(11,060,444)
Total Comprehensive Income for the Year	170,521,543	204,505,782	275,670,991	291,867,757	323,186,736
Basic Earnings Per Share (Note 2)	6.42	7.26	10.18	11.82	12.89

Note 1: 2012-2013 financial statements were prepared in accordance with 2010 Taiwan-IFRSs version, 2014-2016 financial statements were prepared in accordance with 2013 Taiwan-IFRSs version. Financial statements of 2014 were adjusted to retrospectively apply newly effected GAAP. Adjustments include a decrease of NT\$12,583 thousand in gross profit, a decrease of NT\$19,356 thousand in income from operations, a decrease of NT\$17,023 thousand in net income and a decrease of NT\$46,150 thousand in total comprehensive income for the year.

Note 2: Based on weighted average shares outstanding in each year.

## 6.1.3 Financial Analysis

### Financial Analysis from 2012 to 2016 (Consolidated) (Note 1)

		2012	2013	2014 (Adjusted)	2015	2016
Capital Structure Analysis	Debts Ratio (%)	24.78	32.88	30.01	26.24	26.31
	Long-term Fund to Property, Plant and Equipment (%)	131.63	135.40	158.16	169.34	157.17
Liquidity Analysis	Current Ratio (%)	168.60	188.90	311.70	351.86	256.95
	Quick Ratio (%)	142.39	168.57	278.03	319.58	241.34
	Times Interest Earned (Times)	177.92	82.41	94.34	110.84	117.74
Operating Performance Analysis	Average Collection Turnover (Times)	9.64	9.11	8.12	8.37	8.78
	Days Sales Outstanding	37.86	40.06	44.95	43.61	41.57
	Average Inventory Turnover (Times)	8.38	8.39	7.42	6.49	8.18
	Average Inventory Turnover Days	43.56	43.49	49.19	56.24	44.62
	Average Payment Turnover (Times)	19.38	20.01	19.39	20.10	20.11
	Property, Plant and Equipment Turnover (Times)	0.91	0.85	0.95	1.01	1.02
	Total Assets Turnover (Times)	0.58	0.54	0.55	0.54	0.53
Profitability Analysis	Return on Total Assets (%)	19.19	17.11	19.33	19.62	19.03
	Return on Equity attributable to Shareholders of the Parent (%)	24.68	24.00	27.86	27.04	25.60
	Operating Income to Paid-in Capital Ratio (%)	69.89	80.77	114.10	123.43	145.76
	Pre-tax Income to Paid-in Capital Ratio (%)	70.08	83.11	116.50	135.14	148.84
	Net Margin (%)	32.78	31.49	34.58	36.34	35.27
	Basic Earnings Per Share (NT\$)	6.42	7.26	10.18	11.82	12.89
	Diluted Earnings Per Share (NT\$)	6.41	7.26	10.18	11.82	12.89
	Cash Flow	Cash Flow Ratio (%)	191.93	183.05	209.70	249.67
	Cash Flow Adequacy Ratio (%)	94.71	88.35	92.15	103.82	108.57
	Cash Flow Reinvestment Ratio (%)	11.46	12.16	13.04	13.76	11.51
Leverage	Operating Leverage	2.32	2.40	2.15	2.26	2.15
	Financial Leverage	1.01	1.01	1.01	1.01	1.01
Industry Specific Key Performance Indicator	Billing Utilization Rate (%) (Note 3)	91	91	97	93	92
	Advanced Technologies (28-nanometer and below) Percentage of Wafer Sales (%)	12	30	42	48	55
	Sales Growth (%)	18.70	17.82	27.77	10.58	12.38
	Net Income Growth (%)	23.90	13.12	40.25	16.18	9.03

Analysis of deviation of 2016 vs. 2015 over 20%:

1. Current ratio (%) decreased by 27% mainly due to increase in payables to contractors and equipment suppliers and short-term loans.
2. Quick ratio (%) decreased by 24% mainly due to increase in payables to contractors and equipment suppliers and short-term loans.
3. Average inventory turnover (Times) increased by 26% and average inventory turnover days decreased by 21% mainly due to strong shipments of leading edge wafers during the year and improving cycle time.
4. Cash flow ratio (%) decreased by 32% mainly due to increase in payables to contractors and equipment suppliers and short-term loans.

Note 1: Before 2012, financial statements were prepared in accordance with R.O.C. GAAP. 2012-2013 financial statements were prepared in accordance with 2010 Taiwan-IFRSs version. 2014-2016 financial statements were prepared in accordance with 2013 Taiwan-IFRSs version.

Note 2: Capacity includes wafers committed by Vanguard and SSMC.

\*Glossary

1. Capital Structure Analysis

- (1) Debt Ratio = Total Liabilities / Total Assets
- (2) Long-term Fund to Property, Plant and Equipment Ratio = (Shareholders' Equity + Noncurrent Liabilities) / Net Property, Plant and Equipment

2. Liquidity Analysis

- (1) Current Ratio = Current Assets / Current Liabilities
- (2) Quick Ratio = (Current Assets - Inventories - Prepaid Expenses) / Current Liabilities
- (3) Times Interest Earned = Earnings before Interest and Taxes / Interest Expenses

3. Operating Performance Analysis

- (1) Average Collection Turnover = Net Sales / Average Trade Receivables
- (2) Days Sales Outstanding = 365 / Average Collection Turnover
- (3) Average Inventory Turnover = Cost of Sales / Average Inventory
- (4) Average Inventory Turnover Days = 365 / Average Inventory Turnover
- (5) Average Payment Turnover = Cost of Sales / Average Trade Payables
- (6) Property, Plant and Equipment Turnover = Net Sales / Average Net Property, Plant and Equipment
- (7) Total Assets Turnover = Net Sales / Average Total Assets

4. Profitability Analysis

- (1) Return on Total Assets = (Net Income + Interest Expenses \* (1 - Effective Tax Rate)) / Average Total Assets
- (2) Return on Equity Attributable to Shareholders of the Parent = Net Income Attributable to Shareholders of the Parent / Average Equity Attributable to Shareholders of the Parent
- (3) Operating Income to Paid-in Capital Ratio = Operating Income / Paid-in Capital
- (4) Pre-tax Income to Paid-in Capital Ratio = Income before Tax / Paid-in Capital
- (5) Net Margin = Net Income / Net Sales
- (6) Earnings Per Share = (Net Income Attributable to Shareholders of the Parent - Preferred Stock Dividend) / Weighted Average Number of Shares Outstanding

5. Cash Flow

- (1) Cash Flow Ratio = Net Cash Provided by Operating Activities / Current Liabilities
- (2) Cash Flow Adequacy Ratio = Five-year Sum of Cash from Operations / Five-year Sum of Capital Expenditures, Inventory Additions, and Cash Dividend
- (3) Cash Flow Reinvestment Ratio = (Cash Provided by Operating Activities - Cash Dividends) / (Gross Property, Plant and Equipment + Long-term Investments + Other Noncurrent Assets + Working Capital)

6. Leverage

- (1) Operating Leverage = (Net Sales - Variable Cost) / Income from Operations
- (2) Financial Leverage = Income from Operations / (Income from Operations - Interest Expenses)



## Financial Analysis from 2012 to 2016 (Unconsolidated) (Note)

		2012	2013	2014 (Adjusted)	2015	2016
Capital Structure Analysis	Debt Ratio (%)	24.32	29.88	26.48	23.63	24.39
	Long-term Fund to Property, Plant and Equipment Ratio (%)	137.67	132.57	156.24	168.96	156.13
Liquidity Analysis	Current Ratio (%)	142.41	137.62	208.09	219.72	144.00
	Quick Ratio (%)	117.49	118.35	171.82	186.00	128.65
	Times Interest Earned (Times)	195.42	104.10	120.82	144.41	146.73
Operating Performance Analysis	Average Collection Turnover (Times)	9.87	9.26	8.29	8.58	8.89
	Days Sales Outstanding	36.98	39.40	44.02	42.54	41.07
	Average Inventory Turnover (Times)	9.13	9.06	7.90	6.87	8.56
	Average Inventory Turnover Days	39.97	40.30	46.18	53.11	42.63
	Average Payment Turnover (Times)	18.22	18.55	18.64	19.73	19.04
	Property, Plant and Equipment Turnover (Times)	0.96	0.87	0.97	1.03	1.03
	Total Assets Turnover (Times)	0.58	0.55	0.58	0.55	0.54
Profitability Analysis	Return on Total Assets (%)	19.45	17.58	20.22	20.42	19.58
	Return on Equity (%)	24.68	24.00	27.86	27.04	25.60
	Operating Income to Paid-in Capital Ratio (%)	68.21	78.93	112.09	120.87	142.59
	Pre-tax Income to Paid-in Capital Ratio (%)	70.88	83.20	116.08	134.97	148.55
	Net Margin (%)	33.24	31.83	34.85	36.63	35.70
	Basic Earnings Per Share (NT\$)	6.42	7.26	10.18	11.82	12.89
	Diluted Earnings Per Share (NT\$)	6.41	7.26	10.18	11.82	12.89
Cash Flow	Cash Flow Ratio (%)	189.88	179.11	230.29	264.94	172.81
	Cash Flow Adequacy Ratio (%)	93.23	86.78	90.72	102.35	107.06
	Cash Flow Reinvestment Ratio (%)	11.36	12.32	13.30	13.85	11.74
Leverage	Operating Leverage	2.37	2.46	2.19	2.31	2.19
	Financial Leverage	1.01	1.01	1.01	1.01	1.01

Analysis of deviation of 2016 vs. 2015 over 20%:

1. Current ratio (%) decreased by 34% mainly due to increase in payables to contractors and equipment suppliers and short-term loans.
2. Quick ratio (%) decreased by 31% mainly due to increase in payables to contractors and equipment suppliers and short-term loans.
3. Average inventory turnover (Times) increased by 25% and average inventory turnover days decreased by 20% mainly due to strong shipments of leading edge wafers during the year and improving cycle time.
4. Cash flow ratio (%) decreased by 35% mainly due to increase in payables to contractors and equipment suppliers and short-term loans.

Note: Before 2012, financial statements were prepared in accordance with R.O.C. GAAP. 2012-2013 financial statements were prepared in accordance with 2010 Taiwan-IFRSs version. 2014-2016 financial statements were prepared in accordance with 2013 Taiwan-IFRSs version.

### \*Glossary

#### 1. Capital Structure Analysis

- (1) Debt Ratio = Total Liabilities / Total Assets
- (2) Long-term Fund to Fixed Assets Ratio = (Shareholders' Equity + Long-term Liabilities) / Net Fixed Assets

#### 2. Liquidity Analysis

- (1) Current Ratio = Current Assets / Current Liabilities
- (2) Quick Ratio = (Current Assets - Inventories - Prepaid Expenses) / Current Liabilities
- (3) Times Interest Earned = Earnings before Interest and Taxes / Interest Expenses

#### 3. Operating Performance Analysis

- (1) Average Collection Turnover = Net Sales / Average Trade Receivables
- (2) Days Sales Outstanding = 365 / Average Collection Turnover
- (3) Average Inventory Turnover = Cost of Sales / Average Inventory
- (4) Average Inventory Turnover Days = 365 / Average Inventory Turnover
- (5) Average Payment Turnover = Cost of Sales / Average Trade Payables
- (6) Fixed Assets Turnover = Net Sales / Average Net Fixed Assets
- (7) Total Assets Turnover = Net Sales / Average Total Assets

#### 4. Profitability Analysis

- (1) Return on Total Assets = (Net Income + Interest Expenses \* (1 - Effective Tax Rate)) / Average Total Assets
- (2) Return on Equity = Net Income / Average Shareholders' Equity
- (3) Operating Income to Paid-in Capital Ratio = Operating Income / Paid-in Capital
- (4) Pre-tax Income to Paid-in Capital Ratio = Income before Tax / Paid-in Capital
- (5) Net Margin = Net Income / Net Sales
- (6) Earnings Per Share = (Net Income - Preferred Stock Dividend) / Weighted Average Number of Shares Outstanding

#### 5. Cash Flow

- (1) Cash Flow Ratio = Net Cash Provided by Operating Activities / Current Liabilities
- (2) Cash Flow Adequacy Ratio = Five-year Sum of Cash from Operations / Five-year Sum of Capital Expenditures, Inventory Additions, and Cash Dividend
- (3) Cash Flow Reinvestment Ratio = (Cash Provided by Operating Activities - Cash Dividends) / (Gross Fixed Assets + Long-term Investments + Other Assets + Working Capital)

#### 6. Leverage

- (1) Operating Leverage = (Net Sales - Variable Cost) / Income from Operations
- (2) Financial Leverage = Income from Operations / (Income from Operations - Interest Expenses)

## 6.1.4 Auditors' Opinions from 2012 to 2016

Year	CPA	Audit Opinion
2012	Hung-Peng Lin, Shu-Chieh Huang	An Unqualified Opinion
2013	Yih-Hsin Kao, Hung-Wen Huang	An Unqualified Opinion
2014	Yih-Hsin Kao, Hung-Wen Huang	An Unqualified Opinion
2015	Yih-Hsin Kao, Hung-Wen Huang	An Unqualified Opinion
2016	Yih-Hsin Kao, Yu-Feng Huang	An Unmodified Opinion (Note)

Note: Starting in 2016, the new auditing standard of the Republic of China requires "An Unqualified Opinion" be replaced by "An Unmodified Opinion".

Deloitte & Touche  
12F, No. 156, Sec. 3, Min-Sheng E. Rd., Taipei, Taiwan, R.O.C.  
Tel: 886-2-2545-9988

## 6.1.5 Audit Committee's Review Report

The Board of Directors has prepared the Company's 2016 Business Report, Financial Statements, and proposal for allocation of earnings. The CPA firm of Deloitte & Touche was retained to audit TSMC's Financial Statements and has issued an audit report relating to the Financial Statements. The Business Report, Financial Statements, and earnings allocation proposal have been reviewed and determined to be correct and accurate by the Audit Committee members of Taiwan Semiconductor Manufacturing Company Limited. According to relevant requirements of the Securities and Exchange Act and the Company Law, we hereby submit this report.

Taiwan Semiconductor Manufacturing Company Limited

Chairman of the Audit Committee: Sir Peter Leahy Bonfield



February 14, 2017

## 6.1.6 Financial Difficulties

The Company should disclose the financial impact to the Company if the Company and its affiliated companies have incurred any financial or cash flow difficulties in 2016 and as of the date of this Annual Report: None.

## 6.1.7 Consolidated Financial Statements and Independent Auditors' Report along with Parent Company Only Financial Statements and Independent Auditors' Report

Please refer to Annual Report section (II), Financial Statements.

## 6.2 Financial Status and Operating Results

### 6.2.1 Financial Status

#### Consolidated

Unit: NT\$ thousands

Item	2016	2015	Difference	%
Current Assets	817,729,126	746,743,991	70,985,135	10%
Long-term Investments (Note 1)	46,153,916	34,993,583	11,160,333	32%
Property, Plant and Equipment	997,777,687	853,470,392	144,307,295	17%
Intangible Assets	14,614,846	14,065,880	548,966	4%
Other Assets (Note 2)	10,179,727	8,244,452	1,935,275	23%
Total Assets	1,886,455,302	1,657,518,298	228,937,004	14%
Current Liabilities	318,239,273	212,228,594	106,010,679	50%
Noncurrent Liabilities	178,164,903	222,655,225	(44,490,322)	-20%
Total Liabilities	496,404,176	434,883,819	61,520,357	14%
Capital Stock	259,303,805	259,303,805	0	0%
Capital Surplus	56,272,304	56,300,215	(27,911)	0%
Retained Earnings	1,072,008,169	894,293,586	177,714,583	20%
Others	1,663,983	11,774,113	(10,110,130)	-86%
Equity Attributable to Shareholders of the Parent	1,389,248,261	1,221,671,719	167,576,542	14%
Total Equity	1,390,051,126	1,222,634,479	167,416,647	14%

Note 1: Long-term investments consist of noncurrent available-for-sale financial assets, held-to-maturity financial assets, financial assets carried at cost and investments accounted for using equity method.  
Note 2: Other assets consist of deferred income tax assets, refundable deposits, and other noncurrent assets.

#### • Analysis of Deviation over 20%

Increase in long-term investments: The increase was mainly due to increase in held-to-maturity financial assets.

Increase in other assets: The increase was mainly due to increase in deferred income tax assets.

Increase in current liabilities: The increase was mainly due to increase in payables to contractors and equipment suppliers and short-term loans.

Decrease in noncurrent liabilities: The decrease was mainly due to reclassification of bonds payable due in 1 year to current liabilities and decrease in guarantee deposits.

Increase in retained earnings: The increase was mainly due to net income of 2016, partially offset by distribution of 2015 earnings.

Decrease in others: The decrease was mainly due to decrease in currency exchange differences arising from translation of foreign operations in 2016.

#### • Major Impact on Financial Position

The above deviations had no major impact on TSMC's financial position.

• Future Plan on Financial Position: Not applicable.

#### Unconsolidated

Unit: NT\$ thousands

Item	2016	2015	Difference	%
Current Assets	443,781,164	426,913,080	16,868,084	4%
Long-term Investments (Note 1)	397,290,976	326,330,737	70,960,239	22%
Property, Plant and Equipment	979,401,337	831,784,912	147,616,425	18%
Intangible Assets	10,047,991	9,391,418	656,573	7%
Other Assets (Note 2)	6,816,676	5,265,368	1,551,308	29%
Total Assets	1,837,338,144	1,599,685,515	237,652,629	15%
Current Liabilities	308,177,214	194,299,278	113,877,936	59%
Noncurrent Liabilities	139,912,669	183,714,518	(43,801,849)	-24%
Total Liabilities	448,089,883	378,013,796	70,076,087	19%
Capital Stock	259,303,805	259,303,805	0	0%
Capital Surplus	56,272,304	56,300,215	(27,911)	0%
Retained Earnings	1,072,008,169	894,293,586	177,714,583	20%
Others	1,663,983	11,774,113	(10,110,130)	-86%
Total Equity	1,389,248,261	1,221,671,719	167,576,542	14%

Note 1: Long-term investments consist of held-to-maturity financial assets, financial assets carried at cost and investments accounted for using equity method.

Note 2: Other assets consist of deferred income tax assets, refundable deposits, and other noncurrent assets.

#### • Analysis of Deviation over 20%

Increase in long-term investments: The increase was mainly due to increase in investments accounted for using equity method in 2016.

Increase in other assets: The increase was mainly due to increase in deferred income tax assets.

Increase in current liabilities: The increase was mainly due to increase in payables to contractors and equipment suppliers and short-term loans.

Decrease in noncurrent liabilities: The decrease was mainly due to reclassification of bonds payable due in 1 year to current liabilities and decrease in guarantee deposits.

Increase in retained earnings: The increase was mainly due to net income of 2016, partially offset by distribution of 2015 earnings.

Decrease in others: The decrease was mainly due to decrease in currency exchange differences arising from translation of foreign operations in 2016.

#### • Major Impact on Financial Position

The above deviations had no major impact on TSMC's financial position.

• Future Plan on Financial Position: Not applicable.

## 6.2.2 Financial Performance

### Consolidated

Unit: NT\$ thousands

Item	2016	2015	Difference	%
Net Revenue	947,938,344	843,497,368	104,440,976	12%
Cost of Revenue	473,077,173	433,117,601	39,959,572	9%
Gross Profit before Realized (Unrealized) Gross Profit on Sales to Associates	474,861,171	410,379,767	64,481,404	16%
Realized (Unrealized) Gross Profit on Sales to Associates	(29,073)	15,126	(44,199)	-292%
Gross Profit	474,832,098	410,394,893	64,437,205	16%
Operating Expenses	96,904,133	88,466,500	8,437,633	10%
Other Operating Income and Expenses, Net	29,813	(1,880,618)	1,910,431	NM
Income from Operations	377,957,778	320,047,775	57,910,003	18%
Non-operating Income and Expenses	8,001,602	30,381,136	(22,379,534)	-74%
Income before Income Tax	385,959,380	350,428,911	35,530,469	10%
Income Tax Expenses	51,621,144	43,872,744	7,748,400	18%
Net Income	334,338,236	306,556,167	27,782,069	9%
Other Comprehensive Income, Net of Income Tax	(11,067,189)	(14,714,182)	3,646,993	25%
Total Comprehensive Income for the Year	323,271,047	291,841,985	31,429,062	11%
Total Net Income Attributable to Shareholders of the Parent	334,247,180	306,573,837	27,673,343	9%
Total Comprehensive Income Attributable to Shareholders of the Parent	323,186,736	291,867,757	31,318,979	11%

#### • Analysis of Deviation over 20%

Decrease in realized (unrealized) gross profit on sales to associates: The decrease was mainly due to higher sales to associates and defer recognition of gain in the fourth quarter of 2016.

Decrease in non-operating income and expenses: The decrease was mainly due to lower gain on disposal of available-for-sale financial assets.

Increase in other comprehensive income, net of income tax: The increase was mainly due to unrealized gain from available-for-sale financial assets was realized to profit or loss upon disposal in 2015, partially offset by decrease in currency exchange differences arising from translation of foreign operations in 2016.

#### • Sales Volume Forecast and Related Information

For additional details, please refer to "1. Letter to Shareholders" on pages 8-11 of this Annual Report.

#### • Major Impact on Financial Performance

The above deviations had no major impact on TSMC's financial performance.

#### • Future Plan on Financial Performance: Not applicable.

### Unconsolidated

Unit: NT\$ thousands

Item	2016	2015	Difference	%
Net Revenue	936,387,291	837,046,888	99,340,403	12%
Cost of Revenue	474,552,913	439,356,165	35,196,748	8%
Gross Profit before Realized (Unrealized) Gross Profit on Sales to Subsidiaries and Associates	461,834,378	397,690,723	64,143,655	16%
Realized (Unrealized) Gross Profit on Sales to Subsidiaries and Associates	(26,082)	18,117	(44,199)	-244%
Gross Profit	461,808,296	397,708,840	64,099,456	16%
Operating Expenses	92,161,728	83,953,035	8,208,693	10%
Other Operating Income and Expenses, Net	83,965	(347,107)	431,072	NM
Income from Operations	369,730,533	313,408,698	56,321,835	18%
Non-operating Income and Expenses	15,458,427	36,579,970	(21,121,543)	-58%
Income before Income Tax	385,188,960	349,988,668	35,200,292	10%
Income Tax Expenses	50,941,780	43,414,831	7,526,949	17%
Net Income	334,247,180	306,573,837	27,673,343	9%
Other Comprehensive Income, Net of Income Tax	(11,060,444)	(14,706,080)	3,645,636	25%
Total Comprehensive Income for the Year	323,186,736	291,867,757	31,318,979	11%

#### • Analysis of Deviation over 20%

Decrease in realized (unrealized) gross profit on sales to subsidiaries and associates: The decrease was mainly due to higher sales to subsidiaries and associates and defer recognition of gain in the fourth quarter of 2016.

Decrease in non-operating income and expenses: The decrease was mainly due to lower share of profits of subsidiaries and associates in 2016.

Increase in other comprehensive income, net of income tax: The increase was mainly due to unrealized gain from available-for-sale financial assets of the subsidiary was realized to profit or loss upon disposal in 2015, partially offset by decrease in currency exchange differences arising from translation of foreign operations in 2016.

#### • Sales Volume Forecast and Related Information

For additional details, please refer to "1. Letter to Shareholders" on pages 8-11 of this Annual Report.

#### • Major Impact on Financial Performance

The above deviations had no major impact on TSMC's financial performance.

#### • Future Plan on Financial Performance: Not applicable.



### 6.2.3 Cash Flow

#### Consolidated

Unit: NT\$ thousands

Cash Balance 12/31/2015	Net Cash Provided by Operating Activities in 2016	Net Cash Used in Investing and Financing Activities in 2016	Cash Balance 12/31/2016	Remedy for Liquidity Shortfall	
				Investment Plan	Financing Plan
562,688,930	539,834,592	(561,269,689)	541,253,833	None	None

#### • Analysis of Cash Flow

NT\$539.8 billion net cash generated by operating activities: mainly from net income and depreciation and amortization expenses. NT\$395.4 billion net cash used in investing activities: primarily for capital expenditures and net purchase of marketable financial instruments.

NT\$165.8 billion net cash used in financing activities: primarily for cash dividend payment and repayment of corporate bonds, partially offset by the increase in short-term loans.

• **Remedial Actions for Liquidity Shortfall:** As a result of positive operating cash flows and cash on-hand, remedial actions are not required.

• **Cash Flow Projection for Next Year:** Not applicable.

#### Unconsolidated

Unit: NT\$ thousands

Cash Balance 12/31/2015	Net Cash Provided by Operating Activities in 2016	Net Cash Used in Investing and Financing Activities in 2016	Cash Balance 12/31/2016	Remedy for Liquidity Shortfall	
				Investment Plan	Financing Plan
264,493,583	532,547,786	(547,162,806)	249,878,563	None	None

#### • Analysis of Cash Flow

NT\$532.5 billion net cash generated by operating activities: mainly from net income and depreciation and amortization expenses. NT\$321.9 billion net cash used in investing activities: primarily for capital expenditures.

NT\$225.2 billion net cash used in financing activities: primarily for cash dividend payment and capital injection in subsidiaries.

• **Remedial Actions for Liquidity Shortfall:** As a result of positive operating cash flows and cash on-hand, remedial actions are not required.

• **Cash Flow Projection for Next Year:** Not applicable.

### 6.2.4 Recent Years Major Capital Expenditures and Impact on Financial and Business

Unit: NT\$ thousands

Plan	Actual or Planned Source of Capital	Total Amount for 2016 and 2015	Actual Use of Capital	
			2016	2015
Production Facilities, R&D and Production Equipment	Cash flow generated from operations	578,773,185	325,471,832	253,301,353
Others	Cash flow generated from operations	6,788,920	2,573,438	4,215,482
Total		585,562,105	328,045,270	257,516,835

Based on capital expenditures listed above, TSMC's annual production capacity increased by approximately 1 million 12-inch equivalent wafers in 2016.

### 6.2.5 Long-term Investment Policy and Results

TSMC's long-term investments, accounted for under the equity method, were all made for strategic purposes. However, when an investment is no longer of strategic value, it may be considered a financial investment. In 2016, the investment gain from these investments amounted to NT\$14,941,372 thousand (NT\$3,495,600 thousand on a consolidated basis), decreasing from previous year mainly due to the disposal gain of ASML shares recognized in 2015. For future investments, TSMC will continue to focus on strategic purposes through prudent assessments.

### 6.3 Risk Management

The board of directors plays a key role in helping the Company identify and manage economic risks. The risk management organization periodically briefs the audit committee on the ever-changing risk environment facing TSMC, the focus of the Company's enterprise risk management, and risk assessment and mitigation efforts. The audit committee's chairperson also briefs the board on the risk environment and risk mitigation actions to be taken.

TSMC and its subsidiaries are committed to proactively and cost effectively integrating and managing strategic, operational, financial and hazardous risks together with potential consequences to operations and financial results. TSMC operates an enterprise risk management (ERM) program based on both its corporate vision and its long-term sustainability, as well as on its responsibility to both industry and society. ERM seeks to provide the appropriate management of risks by TSMC on behalf of all stakeholders. A risk MAP that considers likelihood and impact severity is used to identify and prioritize corporate risks. Various risk treatment strategies are also adopted in response to identified corporate risks. The Company's risk management focuses on strategic risks, operational risks, financial risks, hazardous risks, and risks associated with climate change and non-compliance with environmental and climate related laws and regulations, and other international laws, regulations and accords, etc.

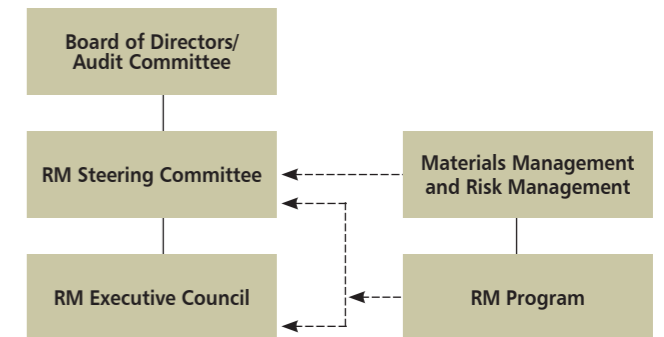
To mitigate the operational impacts of crisis events, for critical crisis scenarios, ERM conducts pre-crisis risk assessment and identifies feasible strategies for crisis prevention. Corresponding to different scenarios, response procedures and recovery plans have been compiled. For specific severe crisis events involving multiple TSMC's manufacturing sites, the cross-functional central crisis command center composed of operations and support functions is responsible for internal

coordination to speed up response time and proactively communicate with related stakeholders. To increase risk awareness and strengthen a risk management culture in TSMC, top management completed a series of crisis management workshops in 2016. The scenario-based crisis response drills involving cross-functional crisis management teams also started in 2016. In order to continuously mitigate corporate risks, drills are used to examine the integrity and risk-control effectiveness of ERM.

To reduce supply chain risks, TSMC created a cross-functional taskforce comprised of members from fab operations, material management, risk management and quality system management to work with suppliers to develop business continuity plans and enhance supply chain resilience to effectively manage the risks faced by its suppliers. Partly as a result of these efforts, there was no interruption in TSMC's supply chain in 2016.

As TSMC continued to expand production capacity with advanced technology in 2016, seismic protection engineering design, risk treatment practices and green factory projects were initiated and implemented, beginning in the design phase for all new fabs.

#### 6.3.1 Risk Management (RM) Organization Chart



#### Organization Functions

##### • RM steering committee

Consists of functional heads (with internal audit head sitting as an observer)

Reports to audit committee

Reviews risk control progress

Identifies and approves the prioritized risk lists

##### • RM executive council

Consists of representatives from each function

Identifies and assesses risks

Implements risk control program and ensures effectiveness

Improves transparency and how risks are managed

#### ●RM program

Coordinates and facilitates functional risk management activities  
Initiates cross-functional communication for risk mitigation  
Consolidates ERM reports into the RM steering committee

### 6.3.2 Strategic Risks

#### Risks Associated with Changes in Technology and Industry

##### ●Industry Developments

The electronics industries and semiconductor markets are cyclical and subject to significant and often rapid fluctuations in product demand, which could impact TSMC's foundry business. Variations in order levels from customers may result in volatility in the Company's revenue and earnings.

From time to time, the electronics and semiconductor industries have experienced significant, occasionally prolonged periods of downturn and overcapacity. Because TSMC is, and will continue to be, dependent on the requirements of electronics and semiconductor companies, periods of downturn and overcapacity in the general electronics and semiconductor industries could lead to reduced demand for semiconductor foundry services, including TSMC's services. If TSMC cannot take appropriate actions such as reducing its costs to sufficiently offset declines in demand, the Company's revenue, margins, and earnings will likely suffer during these periods.

##### ●Changes in Technology

The semiconductor industry and its technologies are constantly evolving. TSMC competes by developing process technologies using increasingly advanced nodes and by manufacturing products with more functions. TSMC also competes by developing new derivative technologies. If TSMC does not anticipate the changes in technologies and rapidly develop new and innovative technologies, or if the Company's competitors unexpectedly gain sudden access to additional technologies, TSMC may not be able to provide foundry services on competitive terms. In addition, TSMC's customers have significantly decreased the time in which their products or services are brought to the market. If TSMC is unable to meet the requirement for shorter product time-to-market, it risks losing customers. These factors have also been intensified by the shift of the global technology market to consumer-driven products such as mobile devices, and the increasing concentration of customers and competition (all further discussed among these risk factors). If TSMC is unable to innovate new technologies that meet the demands of its

customers or overcome the above factors, its revenue may decline significantly. Although TSMC has concentrated on maintaining a competitive edge in research and development, if TSMC fails to achieve advances in technologies or processes, it may become less competitive.

Regarding the response measures for the above-mentioned risks, please refer to "2.2.4 TSMC Position, Differentiation and Strategy" on page 18-19 of this annual report.

#### Risks Associated with Decrease in Demand and Average Selling Price

A vast majority of the Company's revenue is derived from customers who use TSMC's services in communication devices, personal computers, consumer electronics products and industrial/standard products. Any decrease in the demand for any one of these products may decrease the demand for overall global semiconductor foundry services, including TSMC's services, and may adversely affect the Company's revenues. Further, semiconductor manufacturing facilities require substantial investment to construct and are largely fixed cost assets once they are in operation. Because the Company owns most of its manufacturing capacities, a significant portion of TSMC's operating costs is fixed. In general, these costs do not decline when customer demand or TSMC's capacity utilization rates drop, and thus declines in customer demand, among other factors, may significantly decrease margins. Conversely, as product demand rises and factory utilization increases, the fixed costs are spread over increased output, which can improve TSMC's margins. In addition, the historical and current trend of declining average selling prices ("ASP") of end use applications places downward pressure on the prices of the components that go into such applications. If the ASP of end use applications continues decreasing, the pricing pressure on components produced by the Company may lead to a reduction of TSMC's revenue, margin and earnings.

#### Risks Associated with Competition

The markets for TSMC's foundry services are highly competitive. TSMC competes with other foundry service providers, as well as integrated device manufacturers who devote a significant portion of their manufacturing capacity to foundry operations. Some of these companies may have access to more advanced technologies and greater financial resources than TSMC, including the possibility of receiving direct or indirect government aid, economic stimulus funds, or other incentives that may be unavailable to TSMC. For example, China companies are expected to be the key drivers of new semiconductor fab development and fab equipment spending

through 2020. In 2016 alone, it was reported that over twenty new semiconductor fab projects have been announced or being developed within China due to various incentives provided by China government.

Further, the Company's competition may, from time to time, also decide to undertake aggressive pricing initiatives in one or several technology nodes. Increases in these competitive activities may reduce TSMC's customer base, its ASP (average selling price), or both. If TSMC is unable to compete with these new competitors with better technologies and manufacturing capacity and capabilities for customer satisfaction, it risks losing customers to these new contenders.

#### Risks Associated with Changes in the Government Policies and Regulatory Environment

TSMC management closely monitors all domestic and foreign governmental policies and regulations that might impact TSMC's business and financial operations. As of February 28, 2017, the following changes or developments in governmental policies and regulations may influence the Company's business operations:

To comply with the Labor Standards Act amended on December 21, 2016, TSMC made certain changes to its relevant internal rules, including adjusting overtime pay for work on days of rest as well as increasing employees' annual leave entitlements. These changes will increase the operating costs of the Company.

With respect to environmental laws, the "Greenhouse Gas Reduction and Management Act" was published in July 2015 in Taiwan in response to climate change, and some of the related regulations have been released. In 2016, among others, the "Greenhouse Gases Inventory Verification and Registration Regulations" was published and TSMC has taken proper measures in compliance with the requirements. We will keep track of regulatory updates to ensure our compliance with these laws and regulations. In addition, the amendment to "Waste Disposal Act" became effective in January 2017. The key changes define and broaden the scope of "waste" and increase the responsibilities of waste generating companies. TSMC has spent great effort on waste management. We will continue our emphasis on this topic to ensure compliance with the law.

Other than the above laws and regulations, it is not expected that other governmental policies or regulatory changes would materially impact TSMC's operations and financial condition.

### 6.3.3 Operational Risks

#### Risks Associated with Capacity Expansion

TSMC performs long-term market demand forecast for its products and services to manage its overall capacity. Because market conditions are dynamic, its market demand forecast may change significantly at any time. During periods of decreased demand, certain manufacturing lines or tools in some of its manufacturing facilities may be suspended or shut down temporarily. However, if subsequent demand increases rapidly in a short period of time, TSMC may not be able to restore the capacity in a timely manner.

Recently, according to the market demand forecast, TSMC has been adding capacity in its 300mm wafer fabs to fulfill market needs for its products and services. Expansion of the Company's capacity will increase its costs. For example, the Company will need to purchase additional equipment, hire additional personnel and train personnel to operate the new equipment. If TSMC does not increase its net revenue accordingly, TSMC's financial performance may be adversely affected by these increased costs.

In order to mitigate the risk associated with capacity expansion, TSMC continuously watches for changes in market conditions and works closely with its customers. When market demand is not as expected, the Company will adjust its capacity plans in a timely manner to reduce the impact on its financial performance.

#### Risks Associated with Sales Concentration

Over the years, TSMC's customer profile and the nature of its customers' businesses have changed dramatically. While it generates revenue from hundreds of customers worldwide, TSMC's ten largest customers accounted for approximately 63% and 69% of net revenue in 2015 and 2016, respectively. The Company's largest customer accounted for approximately 16% and 17% of net revenue in 2015 and 2016, respectively. The Company's second largest customer accounted for approximately 16% and 11% of net revenue in 2015 and 2016, respectively.

A more concentrated customer base will subject our revenue to seasonal demand fluctuations from our large customers, and cause different seasonal patterns of our business. This customer concentration results in part from the changing dynamics of the electronics industry with the structural shift to mobile devices and applications and software that provide the content for such devices. Only a limited number of customers are successfully exploiting this new business model paradigm.

In order to respond to the new paradigm, TSMC has seen the change of nature in its customers' business models. For example, there is a growing trend toward more system houses that operate in a manner that makes their products and services more marketable in a changing consumer market. Also, since the global semiconductor industry is becoming increasingly competitive, some customers have engaged in industry consolidations in order to remain competitive. Such consolidations have taken the form of mergers and acquisitions. If more of major customers consolidate, this will further decrease the overall number of the customer pool. TSMC's operating results and financial condition could be adversely affected by the loss of, or significant curtailment of, purchases by one or more of the Company's top customers, including curtailment due to increased competitive pressures, industry consolidation, a change in their designs, or change in their manufacturing sourcing policies, or practices of these customers, or the timing of customer or distributor inventory adjustments, or change in its major customers' business models.

TSMC maintains a close watch on these trends and works closely with its customers to respond to these changes and to strengthen the Company's market position.

#### **Risks Associated with Purchase Concentration**

##### **• Raw Materials**

TSMC's production operations require that TSMC obtains adequate supplies of raw materials, such as silicon wafers, gases, chemicals and photoresist, on a timely basis and at commercially reasonable prices. In the past, shortages in the supply of some materials, whether by specific vendors or by the semiconductor industry generally, have resulted in occasional industry-wide price adjustments and delivery delays. For example, the recent increase in silicon wafer prices due to increased demand for such wafers across industry is expected to negatively impact our gross margin in 2017. In addition, major natural disasters, political or economic turmoil occurring within the country of origin of such raw materials may also significantly disrupt the availability of such raw materials or increase their prices. Also, since TSMC procures some raw materials from sole-source suppliers, there is a risk that the need for such raw materials may not be met or that back-up supplies may not be readily available. TSMC's revenue and earnings could decline if the Company is unable to obtain adequate supplies of the necessary raw materials in a timely manner or if there are significant increases in the costs of raw materials that the Company cannot pass on to customers. To reduce the supply chain risk and to manage the cost actively, TSMC is committing resources toward developing new supply sources. In addition, the Company continually encourages its suppliers to reduce their supply chain risk by decentralizing production

plants and to improve their cost competitiveness by moving their production facilities to Taiwan from higher-cost areas.

In the meantime, aware of the risk posed by fewer back-up suppliers, TSMC is engaging early and deeply with primary suppliers on managing quality and capacity issues to be prepared for any unexpected need to ramp up production, which could leave the Company with insufficient time to re-tune its production process. For leading technology nodes, TSMC uses world-class processes at world-class facilities but also requires world-class material quality. To streamline supply chain risk management, the Company intensifies supplier site audits and extends supply chain best practices to suppliers to mitigate capacity and quality risks. Moreover, TSMC continually refines its planning system and enhances demand forecast alignments with critical suppliers for more accurate supply capacity planning, especially for steep ramping up of new nodes. The Company has developed a supply chain risk assessment for critical suppliers that fulfills requirements on labor and ethics, ESH (environmental, safety and health) and single supply risk management. To ultimately empower them to take responsibility for their supply chain, on-site audits are regularly conducted. Any regulatory violations or any adverse environmental impact event, as well as a failure to meet TSMC's expectations in sustainability requirements, may result in business reduction or termination.

##### **• Equipment**

The Company's operations and ongoing expansion plans depend on its ability to obtain an appropriate amount of equipment and related services from a limited number of suppliers in a market that is characterized from time to time by limited supply and long delivery cycles. During such times, supplier-specific or industry-wide lead times for delivery can be as long as six months or more. To better manage its supply chain, the Company has implemented various business models and risk management contingencies with suppliers to shorten the procurement lead time. Further, the growing complexities, especially in next-generation lithographic technologies may delay the timely availability of the equipment and parts needed to exploit time-sensitive business opportunities and also increase the market price for such equipment and parts. If TSMC is unable to obtain equipment in a timely manner to fulfill its customers' demands on technology and production capacity, or at a reasonable cost, its financial condition and results of operations could be negatively impacted.

#### **Risks Associated with Intellectual Property Rights**

The Company's ability to compete successfully and to achieve future growth will depend in part on the continued strength of its intellectual property portfolio. While TSMC actively

enforces and protects its intellectual property rights, there can be no assurance that its efforts will be adequate to prevent the misappropriation or improper use of its proprietary technologies, software, trade secrets or know-how. Also, the Company cannot assure that, as its business or business models expand into new areas, it will be able to develop independently the technologies, patents, software, trade secrets or know-how necessary to conduct its business or that it can do so without unknowingly infringing the intellectual property rights of others. As a result, TSMC may have to rely on, to a certain degree, licensed technologies and patent licenses from others. To the extent that the Company relies on licenses from others, there can be no assurance that it will be able to obtain any or all of the necessary licenses in the future on terms it considers reasonable or at all. The lack of necessary licenses could expose TSMC to claims for damages and/or injunctions from third parties, as well as claims for indemnification by its customers in instances where it has contractually agreed to indemnify its customers against damages resulting from infringement claims.

TSMC has received, from time-to-time, communications from third parties asserting that TSMC's technologies, its manufacturing processes, or the design of the semiconductors made by TSMC or the use of those semiconductors by its customers may infringe their patents or other intellectual property rights. Because of the nature of the industry, the Company may continue to receive such communications in the future. These assertions have at times resulted in litigation. Recently, there has been a notable increase in the number of assertions made and lawsuits initiated by certain litigious, non-practicing entities and these litigious, non-practicing entities are also becoming more aggressive in their monetary demands and requests for court-issued injunctions. Such lawsuits or assertions may increase TSMC's cost of doing business and may potentially be extremely disruptive if these non-practicing entities succeed in blocking the trade of products and services offered by TSMC.

The Company has expended or is expanding its manufacturing operations into certain offshore jurisdictions. To mitigate the risk of intellectual property misappropriation, TSMC has implemented heightened safeguards against such misappropriation.

If TSMC fails to obtain or maintain certain technologies or intellectual property licenses (or fails to prevent our intellectual property from being misappropriated) and, if litigation relating to such intellectual property matters occurs, it (i) could prevent the Company from manufacturing particular products or selling particular services or applying particular technologies; and

(ii) reduce our ability to compete effectively against entities benefiting from our misappropriated intellectual property, which could reduce its opportunities to generate revenue.

TSMC has taken related measures to minimize potential loss of shareholder value arising from intellectual property claims and litigation filed against the Company. These measures include: strategically obtaining licenses from certain semiconductor and other technology companies as needed; timely securing intellectual property rights for defensive and/or offensive protection of TSMC technology and business; and aggressively defending against baseless litigation.

#### **Risks Associated with Litigation**

As is the case with many companies in the semiconductor industry, TSMC has received from time-to-time communications from third parties asserting that its technologies, its manufacturing processes, or the design of the semiconductors made by TSMC or the use of those semiconductors by its customers may infringe upon their patents or other intellectual property rights. These assertions have at times resulted in litigation by or against the Company and settlement payments by the Company. Irrespective of the validity of these claims, TSMC could incur significant costs in the defense thereof or could suffer adverse effects on its operations.

In June 2010, Keranos, LLC, filed a complaint in the U.S. District Court for the Eastern District of Texas alleging that TSMC, TSMC North America, and several other leading technology companies infringe three expired U.S. patents. In response, TSMC, TSMC North America, and several co-defendants in the Texas case filed a lawsuit against Keranos in the U.S. District Court for the Northern District of California in November 2010, seeking a judgment declaring that they did not infringe the asserted patents, and that those patents were invalid. These two litigations have been consolidated into a single lawsuit in the U.S. District Court for the Eastern District of Texas. In February 2014, the Court entered a final judgment in favor of TSMC and TSMC North America, dismissing all of Keranos's claims against TSMC and TSMC North America with prejudice. Keranos appealed the final judgment to the U.S. Court of Appeals for the Federal Circuit, and in August 2015, the Federal Circuit remanded the case back to the Texas court for further proceedings. In January 2017, the Texas court dismissed all of Keranos's claims against TSMC and TSMC North America with prejudice, and dismissed TSMC's and TSMC North America's counterclaims without prejudice. The case is over as to TSMC and TSMC North America.



In December 2010, Ziptronix, Inc. filed a complaint in the U.S. District Court for the Northern District of California accusing TSMC, TSMC North America and one other company of infringing several U.S. patents. In September 2014, the Court granted summary judgment of noninfringement in favor of TSMC and TSMC North America. Ziptronix, Inc. could appeal the Court's order. In August 2015, Tessera Technologies, Inc. announced it had acquired Ziptronix. In February 2017, the Court dismissed all of Ziptronix's claims against TSMC and TSMC North America with prejudice.

In March 2014, DSS Technology Management, Inc. (DSS) filed a complaint in the U.S. District Court for the Eastern District of Texas alleging that TSMC, TSMC North America, TSMC Development, Inc., and several other companies infringe one U.S. patent. TSMC Development, Inc. has subsequently been dismissed. In May 2015, the Court entered a final judgment of noninfringement in favor of TSMC and TSMC North America. DSS appealed the final judgment to the U.S. Court of Appeals for the Federal Circuit (Federal Circuit). In November 2015, the Patent Trial and Appeal Board (PTAB) determined after concluding an Inter Partes Review (IPR) that the patent claims asserted by DSS in the District Court litigation are unpatentable. DSS appealed the PTAB's decision to the Federal Circuit in January 2016. In March 2016, the District Court's judgment of noninfringement was affirmed by the Federal Circuit. In April 2016, the District Court litigation between the parties and the related Federal Circuit appeal were dismissed, and the appeal proceeding of the PTAB's decision is also over as to TSMC.

Other than the matters described above, TSMC was not involved in any other material litigation in 2016 and is not currently involved in any other material litigation.

#### **Risks Associated with Mergers and Acquisitions**

During 2016 and as of the date of this annual report, there were no such risks for TSMC.

#### **Risks Associated with Recruiting Qualified Personnel**

The Company relies on the continued services and contributions of its executive officers and skilled technical and other personnel. TSMC's business could suffer if the Company lost, for whatever reasons, the services and contributions of some of these personnel and could not adequately replace them. TSMC may be required to increase or reduce the number of employees in connection with any business expansion or contraction, in accordance with market demand for the Company's products and services. Since there is intense competition for the recruitment of these personnel, it cannot

ensure that TSMC will always be able to fulfill its personnel requirements in a timely manner.

#### **Future R&D Plans and Expected R&D Spending**

For additional details, please refer to "5.2.7 Future R&D Plans" on page 81 of this Annual Report.

#### **Changes in Corporate Reputation and Impact on Company's Crisis Management**

TSMC has established an excellent corporate reputation around the world based on its core values of integrity, commitment, innovation and customer trust, as well as its outstanding operations, rigorous corporate governance, and dedication to social responsibility by serving as a good corporate citizen and continuing to pursue innovation in the economic, environmental and social dimensions of CSR.

In 2016, TSMC was honored with awards for achievements in operations, corporate governance, innovation, profit growth, investor relations, environmental protection and in other fields as well. These included the R.O.C. Presidential Innovation Award; the Taiwan Institute for Sustainable Energy 2016 Taiwan Corporate Sustainability Awards No.1 for Domestic Corporates, Gold Medal For Sustainability Report, Sustainable Water Management Award, and Climate Leader Award; the R.O.C. Ministry of Economic Affairs Bureau of Foreign Trade "Outstanding Trade Contribution Award"; ranked top 5% in the Taiwan Stock Exchange Corporate Governance Evaluation; ranked No.1 in profit for the China Credit Information Services' ranking of large Taiwan companies; the R.O.C. Ministry of Economic Affairs Industrial Development Bureau "Green Factory Label"; the R.O.C. Environmental Protection Administration "National Environmental Education Award" and "Enterprise Green Procurement Award"; the R.O.C. Ministry of Economic Affairs' "Excellence in Water Conservation Award" and "Excellence in Energy Conservation Award", ranked No.1 in Taiwan by PricewaterhouseCoopers 2016 Global Innovation 1000 Study; ranked No.1 in *Cheers* Magazines' "Most Admired Companies for the New Generation"; named *CommonWealth* Magazine's "Most Admired Company in Taiwan"; and the CSR Model Award for the *Global Views* Magazine Annual Corporate Social Responsibility Survey. In addition, TSMC was selected as a component of the Dow Jones Sustainability Indices for the 16th consecutive year, further strengthening the Company's reputation.

As an important member of the technology industry, TSMC has always endeavored to act as a positive force in society. The Company maintains departments including legal, customer service, materials management, quality & reliability, R&D, risk management, finance, investor relations, operations, ESH

(environment, safety and health), human resources, the TSMC Foundation, the TSMC Volunteer Association, and public relations to coordinate the Company's resources and further enhance TSMC's positive corporate reputation.

To address potential events that may affect the Company's public reputation, including fires and workplace accidents, TSMC maintains an emergency response procedure manual, and health and safety supervisors for each fab hold meetings of the "Environment, Health, and Safety Technical Board" every month. In addition, relevant departments hold regular drills and continuously improve their emergency response and notification procedures. At the same time, TSMC has established communications criteria for all types of stakeholders, and the public relations department is responsible for external communications. In the event of the above emergencies, all departments immediately deploy emergency response measures to reduce casualties and minimize the impact on the surrounding environment, Company property and manufacturing operations. Responders also alert the public relations department at the first stage of response to ensure smooth channels of communications as well as clear and consistent disclosure regarding the situation to maintain the Company's reputation.

#### **Risks Associated with Change in Management**

During 2016 and as of the date of this annual report, there were no such risks for TSMC.

#### **6.3.4 Financial Risks**

##### **Economic Risks**

##### **• Interest Rate Fluctuation**

TSMC is exposed to interest rate risks primarily related to its outstanding debt issuances and investment portfolio. TSMC's interest income and expenses are most sensitive to fluctuations in R.O.C. and U.S. interest rates. Changes in R.O.C. and U.S. interest rates affect the interest earned on the Company's cash, cash equivalents, marketable securities and the fair value of those securities, as well as interest paid on and the fair value of its outstanding debt.

TSMC's investment policy is to achieve a return that will allow the Company to preserve capital and maintain liquidity requirements. Such policy requires the Company's investments generally made in investment grade securities, with the primary objective of minimizing the potential risk of principal loss. TSMC uses a combination of internal and external management to execute its investment strategy. TSMC typically invests in investment grade fixed income securities across various sectors, and limits the amount of credit exposure to

any one issuer. The Company's investments in both fixed rate and floating rate interest earning securities carry a degree of interest rate risk. Majority of the Company's fixed rate securities are classified as available-for-sale, and may have their fair market value adversely impacted due to a rise in interest rates, while floating rate securities may produce less income than predicted if interest rates fall. TSMC has entered, and may enter in the future, into interest rate futures to partially hedge the interest rate risk on its fixed income investments. These hedges may reduce only a portion of, but do not eliminate, the financial impact from movements in interest rates.

##### **• Foreign Exchange Volatility**

Over one-half of TSMC's capital expenditures and manufacturing costs are denominated in currencies other than NT dollars, primarily in US dollars, Japanese yen and Euros. In 2016, more than 90% of the Company's revenue was denominated in US dollars and currencies other than NT dollars. Therefore, any significant fluctuation to its disadvantage in such exchange rates would have an adverse effect on TSMC's financial condition. For example, because TSMC's functional currency is denominated in NT dollars, every 1 percent depreciation of the US dollar against the NT dollar may result in approximately 0.4 percentage point decrease in TSMC's operating margin based on TSMC's 2016 results.

Conversely, if the US dollar appreciates significantly versus other major currencies, the demand for the products and services of TSMC's customers and for its goods and services will likely decrease, which will negatively affect the Company's revenue.

TSMC utilizes short-term debt denominated in foreign currencies and derivative financial instruments, including currency forward contracts and cross-currency swaps, to partially hedge its currency exposure.

Fluctuations in the exchange rate between the US dollar and the NT dollar may affect the US dollar value of the Company's common shares and the market price of the Company's American Depositary Shares (ADSs) and of any cash dividends paid in NT dollars on TSMC's common shares represented by ADSs.

##### **• Inflation, Deflation and Resulting Market Volatility**

The global economy is becoming more vulnerable to sudden unexpected fluctuations in inflationary and deflationary expectations and conditions. Expectations of high inflation and deflation each adversely affects the economy, at both macro and micro levels, by reducing economic efficiency and disrupting investment decisions. Recently, political

uncertainty and negative interest rate policies adopted by some major world economies have exacerbated global fluctuations in inflationary and deflationary expectations. These macro-economic changes have also resulted in market volatility. Such fluctuations and volatility may negatively affect the costs of TSMC's operations and the business operations of its customers who may be forced to plan their purchases of TSMC's goods and services within an uncertain economy. Therefore, the demand for TSMC's products and services could unexpectedly fluctuate severely in accordance with expectations of inflation or deflation as affected by market volatility.

#### **Risks Associated with External Financing**

In times of market instability, sufficient external financing may not be available to the Company on a timely basis, on reasonable market terms, or at all. If sufficient external financing is not available, when TSMC needs such financing to meet its capital requirements, TSMC may be forced to curtail its expansion and modification plans or delay the deployment of new or expanded services until it obtains such financing.

**Risks Associated with High-Risk/Highly Leveraged Investments; Lending, Endorsements, and Guarantees for Other Parties; and Financial Derivative Transactions**  
TSMC did not make high-risk or highly leveraged financial investments in 2016 nor up to the date of this annual report.

TSMC provided a guarantee to TSMC Global, a wholly-owned subsidiary of TSMC, for its issuance of US dollar-denominated senior unsecured corporate bonds in April 2013. As of February 28, 2017, TSMC had an intercompany loan of RMB\$900 million arranged among the Company's subsidiaries, which was in compliance with relevant rules and regulations.

In 2016, the financial transactions of a derivative nature that TSMC entered into were strictly for hedging and not for any trading or speculative purposes. For more information, please refer to page 36 of the annual report section (II), Financial Statements. The fair market value of TSMC's trading and available-for-sale financial securities is subject to prevailing market conditions and may fluctuate from TSMC's carrying value from time to time, which may impact the returns of those securities.

To control various types of financial transactions, the Company has established internal policies and procedures based on sound financial and business practices, all in compliance with the relevant rules and regulations issued by the Taiwan Securities and Futures Bureau. TSMC policies and procedures include "Policies and Procedures for Financial Derivative

Transactions," "Procedures for Lending Funds to Other Parties," "Procedures for Acquisition or Disposal of Assets," and "Procedures for Endorsement and Guarantee".

#### **Risks Associated with Strategic Investments**

From time to time, TSMC has made or will make a series of strategic investments. There is no guarantee that any of these investments will be successful commercially. Any such investment will incur risks, which may result in losses even with careful management. Any loss resulting from such investments may result in significant impairment charges, lower profit margin and ultimately lower distributable earnings. For further information on these investments, please refer to 8. Subsidiary Information and Other Special Notes on pages 136-141 of this annual report.

#### **Risks Associated with Impairment Charges**

Under Taiwan-IFRSs, TSMC is required to evaluate its investments, tangible and intangible assets for impairment whenever triggering events or changes in circumstances indicate that the asset may be impaired. If certain criteria are met, TSMC is required to record an impairment charge. TSMC is also required under Taiwan-IFRSs to evaluate goodwill for impairment at least on an annual basis or more frequently whenever triggering events or changes in circumstances indicate that goodwill may be impaired and the carrying value may not be recoverable. TSMC holds investments in certain publicly listed and private companies, some of which have incurred certain impairment charges disclosed in Annual Report section (II), Financial Statements.

The determination of an impairment charge at any given time is based significantly on the projected results of the Company's operations over a number of years subsequent to that time. Consequently, an impairment charge is more likely to occur during a period when the Company's operating results are otherwise already depressed.

TSMC has established the process and system to closely monitor and assess the risk of any impairment charge. However, the management is unable to estimate the extent or timing of any impairment charge for future years, or whether such impairment charge required may have a material adverse effect on the Company's net income.

#### **6.3.5 Hazardous Risks**

TSMC maintains a comprehensive risk management system dedicated to the safety of people, the conservation of natural resources, and the protection of property. In order to

effectively handle emergencies and natural disasters, at each facility management has developed comprehensive plans and procedures that focus on risk prevention, emergency response, crisis management and business continuity. The Company has adopted local and international standards for environmental, safety and health (ESH) management. All TSMC manufacturing fabs have been ISO 14001 certified (Environmental Management System), OHSAS 18001 certified (Occupational Health and Safety Management System), and QC 080000 certified (Hazardous Substance Process Management System). All manufacturing fabs in Taiwan have also been TOSHMS (Taiwan Occupational Safety and Health Management System) certified. The new fabs will also acquire the above certificates within 18 months of the start of volume production.

The Company pays special attention to preparedness for emergencies or disasters, such as typhoons, floods, droughts caused by climate change, earthquakes, environmental contamination, large-scale product returns, service disruption of IT systems, strikes, pandemics (such as H1N1 influenza), and sudden, unexpected disruptions to the supply of raw materials, water, electricity and other public utilities. TSMC has established a company-wide taskforce dedicated to managing the risk of a water shortage that might arise due to climate change. This taskforce monitors the external supply and internal demand for water. Cross-company consolidations and external collaborations with public agencies are also ongoing in industrial parks to ensure and sustain a stable water supply.

TSMC has further strengthened its business continuity plans, which include periodic risk assessment, risk mitigation, and implementation through the establishment of emergency taskforces when necessary, combined with the preparation of a thorough analysis of the emergency, its impact, alternative actions, and solutions for each possible scenario together with appropriate precautionary and/or recovery measures. Each taskforce is given the responsibility of ensuring TSMC's ability to conduct business while minimizing personal injury, business disruption and financial impact under the circumstances. TSMC's business continuity plan is periodically reviewed according to results of test scenarios or practical implementation for ensuring effective and successful business continuity. Customers are informed of TSMC's strong business continuity capability in order to establish resilience and flexibility in both their supply chain and insurance needs.

In response to the impact of the earthquake that occurred in southern Taiwan on February 6, 2016, TSMC conducted a continuous improvement project, including enhancing earthquake emergency response, enhancing tool anchorage

and seismic isolation facilities, preparedness for speeding up tool salvage and production recovery, and improved TSMC procedures with reference to ISO 22301 business continuity management.

TSMC and many of its suppliers use combustible and toxic materials in their manufacturing processes and are therefore subject to the risk of loss arising from explosion, fire, or environmental influences that cannot be completely eliminated. Although the Company maintains many overlapping risk prevention and protection systems, as well as fire and casualty insurance, TSMC's risk management and insurance coverage may not always be sufficient to cover all of the Company's potential losses. If any of TSMC's fabs or vendor facilities were to be damaged, or cease operations as a result of an explosion, fire or environmental causes, it could reduce the Company's manufacturing capacity and may lead to the loss of important customers, thereby having a potentially adverse and material impact on TSMC's financial performance. In addition to periodic fire-protection inspections and firefighting drills, the Company has also carried out a corporate-wide fire risk mitigation project focused on managerial and hardware improvements.

#### **6.3.6 Risks Associated with Non-Compliance with Environmental and Climate Related Laws and Regulations, and Other International Laws, Regulations and Accords**

Because TSMC engages in manufacturing activities in multiple jurisdictions and conduct business with its customers located worldwide, such activities are subject to a myriad of governmental regulations. For example, the manufacturing, assembling and testing of TSMC's products require the use of metals, chemicals and materials that are subject to environmental, climate-related, health and safety, and humanitarian conflict-free sourcing laws, regulations and guidelines issued worldwide.

Although TSMC may be eligible for various exemptions and/or extensions of time for compliance, the Company's failure to comply with any applicable laws or regulations that materially affect our business and operations could result in:

- significant penalties and legal liabilities, such as the denial of import permits or third party private lawsuits, criminal or administrative proceedings;
- the temporary or permanent suspension of production of the affected products;
- unfavorable alterations in TSMC manufacturing, fabrication and assembly and test processes;

- challenges from customers that place TSMC at a significant competitive disadvantage, such as the loss of actual or potential sales contracts in case the Company is unable to satisfy applicable legal standard or customer requirement;
- restrictions on TSMC operations or sales;
- loss of tax benefits, including termination of current tax incentives, disqualification of tax credit application and repayment of the tax benefits that we are not entitled to; and
- damages to TSMC goodwill and reputation.

Complying with applicable laws and regulations, such as environmental and climate related laws and regulations, could also require us, among other things, to do the following: (a) purchase, use or install remedial equipments; (b) implement remedial programs such as climate change mitigation programs; (c) modify our product designs and manufacturing processes, or incur other significant expenses such as obtaining substitute raw materials or chemicals that may cost more or be less available for our operations.

Our inability to timely obtain approvals necessary for the conduct of our business could impair our operational and financial results. For example, if we are unable to timely obtain environmental related approvals needed to undertake the development and construction of a new fab or expansion project, then such inability may delay, limit, or increase the cost of our expansion plans that could also in turn adversely affect our business and operational results. In light of increased public interest in environmental issues, our operations and expansion plans may be adversely affected or delayed responding to public concern and social environmental pressures even if we comply with all applicable laws and regulations.

TSMC believes that climate change should be regarded as a significant corporate risk that must be controlled to improve our competitiveness. Climate change has the potential to create legal, physical and other risks. TSMC's control measures are as follows:

• **Climate regulatory risks**

Greenhouse gas (GHG) control regulations and agreements in countries around the world are becoming increasingly stringent. Enterprises are legally required to regularly disclose GHG-related information as well as limit GHG emissions. Future legal requirements, such as carbon or energy taxes and carbon emission cap-and-trade may drive up production costs, including material and energy costs. TSMC China is subject to the Shanghai carbon emission cap-and-trade regulation, which has had a cost impact starting in 2016. TSMC continues

to monitor legislative trends and communicate with various governments through industrial organizations and associations to set reasonable and feasible legal requirements.

• **Conflict minerals risks**

For additional details, please refer to the Supplier and Contractor Management section under 7.2.3 Safety and Health on pages 129-130 of this annual report.

• **Climate disaster risks**

Abnormal climate caused by the greenhouse effect has increased the frequency and severity of climate disasters – storms, floods, drought, and water shortages – causing considerable impacts on business operations and supply chains. TSMC believes that climate change control should take into account both mitigation and adaptation, and this requires cooperation among government, society and industry to reduce risk. To ensure electricity and raw water supplies, therefore, in addition to water-saving measures at the Company's own facilities and those of upstream and downstream partners, TSMC participates in the Taiwan Science Park Industrial Union Experts Committee platform, and is actively involved in regular meetings with Taipower Company and the Taiwan Water Corporation to discuss supply and allocation for response issues.

• **Other climate risks**

Climate change is a concern to the global supply chain, necessitating energy conservation, carbon reduction, and disaster prevention. For example, The Electronic Industry Citizenship Coalition (EICC) has also required members' suppliers to disclose GHG emissions information. TSMC not only discloses its own GHG emissions information each year, but it also assists and requires its suppliers to establish a GHG inventory system and conduct reduction programs. TSMC's suppliers are required by TSMC to submit GHG emissions and reduction information as an important index of sustainability scoring in its procurement strategy.

To mitigate risks resulting from climate change, TSMC continues to actively carry out energy conservation measures, participate in voluntary emission reduction projects for perfluorinated compounds (PFC), and conduct GHG inventory and verification on an annual basis. TSMC has publicly disclosed climate change information annually through the following channels:

- TSMC has disclosed GHG emissions and reduction-related information for evaluation by the Dow Jones Sustainability Index every year since 2001.

- TSMC's GHG-related information has been disclosed in its CSR report on the Company website annually since 2008. TSMC also provides information to customers and investors upon request.
- TSMC has been participating in an annual survey held by the nonprofit Carbon Disclosure Project (CDP) since 2005, which includes GHG emission and reduction information for all TSMC fabs and subsidiaries.
- TSMC has followed the ISO 14064-1 standard to conduct a GHG inventory and acquire verification by an accrediting agency since 2006. TSMC also reports GHG inventory data to the Taiwan Environmental Protection Administration (EPA) and the Taiwan Semiconductor Industry Association (TSIA).

**6.3.7 Other Risks**

**Potential Impact and Risks Associated with Sales of Significant Numbers of Shares by TSMC's Directors, and/or Major Shareholders Who Own 10% or more of TSMC's Total Outstanding Shares**

The value of TSMC shareholders' investment may be reduced by possible future sales of TSMC shares owned by major shareholders.

One or more of our existing shareholders may, from time to time, dispose of significant numbers of our common shares or ADSs. For example, the National Development Fund, which owned 6.38% of TSMC's outstanding shares as of February 28, 2017, has from time to time in the past sold TSMC shares in the form of ADSs in several transactions.

As of the date of this annual report, no shareholder owns 10% or more of TSMC's total outstanding shares.

**Risks Associated with Cyber Attacks**

Even though TSMC has established a comprehensive internet and computing security network, it cannot guarantee that the Company's computing systems which control or maintain vital corporate functions like its manufacturing operations and enterprise accounting would be completely immune to crippling cyber viral attacks launched by third party to gain unauthorized access to its internal network systems to sabotage its operations and goodwill. In the event of a serious cyber attack, TSMC's systems may lose important corporate data and its production lines may be shutdown indefinitely pending the resolution of such attack. These cyber attacks may also attempt to steal TSMC's trade secrets and other intellectual properties and other sensitive information, such as proprietary information of the Company's customers and other stakeholders and personal information of the Company's

employees. Malicious hackers may also try to introduce computer viruses, corrupted software or ransomware into the Company's network systems to disrupt its operations, blackmail it for regaining control of its computing systems or spy for sensitive information. These attacks may result in TSMC having to pay damages for its delayed or disrupted orders or incur significant expenses in attempting to re-establish control over the Company's network. If TSMC is not able to timely resolve the technical difficulties caused by such cyber attacks, or ensure the integrity and availability of its data or control of its computing systems, the Company's financial results as well as commitments to its customers and other stakeholders may be materially impaired.

**Other Material Risks**

During 2016 and as of the date of this Annual Report, TSMC's management is not aware of any other risk event that could impart a potentially material impact on the financial status of the Company.



# 16 consecutive years

TSMC was selected as a component of the Dow Jones Sustainability Indices for a 16th consecutive year, reflecting our ongoing commitment to sustainability and corporate social responsibility.





# Corporate Social Responsibility

## 7.1 Overview

TSMC believes a company's corporate social responsibility is to uplift society. As a result, in addition to actively strengthening TSMC's competitiveness in its core business of dedicated IC foundries, the Company is also continuously active in the economic, environmental and social dimensions of corporate responsibility and attends to the rights of all stakeholders including employees, shareholders/investors, customers, suppliers, and local communities to serve as a positive force in society.

### The Scope of Corporate Social Responsibility

TSMC has declared "Uplifting Society" as the Company vision and identified three primary missions: "Acting with Integrity," "Strengthening Environmental Protection," and "Caring for the Disadvantaged" in its Corporate Social Responsibility Policy. The CSR matrix below, set by Chairman Dr. Morris Chang, clearly defines the scope of that responsibility. The horizontal axis shows the seven areas where TSMC aims to set an example: morality, business ethics, economy, rule of law, sustainability, work/life balance and happiness, and philanthropy. On the vertical axis are actions that TSMC has taken to fulfill its responsibilities.

### TSMC CSR Matrix

TSMC \ Society	Morality	Business Ethics	Economy	Rule of Law	Sustainability	Work/Life Balance Happiness	Philanthropy
Integrity	V	V					
Law Compliance				V			
Anti-Corruption Anti-Bribery Anti-Cronyism	V	V		V			
Environmental Protection Climate Control Energy Conservation				V	V		
Corporate Governance		V	V	V			
Provide Well-Paying Jobs			V			V	
Good Shareholder Return			V				
Employees' Work/Life Balance						V	
Encourage Innovation		V	V				
Good Work Environment						V	
Volunteers Organization					V	V	V
Education and Culture Foundation							V

### CSR Management

As the TSMC's top-level group for corporate social responsibility, the CSR committee acts as a center for decision-making and platform for coordination throughout the Company. TSMC's CFO (chief financial officer) serves as chairperson of the CSR committee, which is comprised of representatives from each functional organization. The committee meets each quarter to discuss developments and future directions of CSR operations. It also coordinates across all organizations based on the type and nature of issues addressed and monitors the progress and effectiveness of CSR projects.

Functions related to CSR include legal, customer service, materials management, quality and reliability, research and development, risk management, finance, investor relations, operations, human resources, the TSMC Foundation, the TSMC Volunteer Program, public relations and environment, health, and safety. These functions are responsible for addressing CSR issues of interest to employees, shareholders/investors, customers, suppliers, governments, communities, and other stakeholders to systematically and

effectively fulfill the Company's corporate social responsibilities. The CSR committee chairperson leads committee to jointly set the Company's CSR strategy, identify key issues for the year and monitor the execution of related projects and budgets by each organization to ensure they are effectively carried out. The CSR committee chairperson also annually reports the current year's results and submits plans for the upcoming year to the board of directors.

### Stakeholder Engagement

TSMC's approach to stakeholder relations is divided into four stages: identification, analysis, planning and engagement. In order to pursue sustainable operations, TSMC not only performs direct communications with each of its stakeholders through multiple channels established by CSR-related units but also maintains a "Stakeholder Engagement" section on the corporate website, as well as a CSR mailbox to gather a broad range of views from the public. The CSR mailbox, set up in 2011, is managed by dedicated public relations staff, and submissions are sent to relevant departments according to the nature and range of issues addressed. In 2016, the TSMC CSR mailbox received 472 submissions, including requests for surveys, studies and visits, inquiries about daily operations, recruiting and CSR-related experience sharing, suggestions and complaints from the public, and requests for endorsement, donation and collaboration as well as event invitations. All received timely responses from the Company's dedicated personnel.

### Stakeholders and Communication Channels in 2016

Stakeholders	Communication Channels
Employees	<ul style="list-style-type: none"> <li>Corporate intranet, internal emails and other announcement channels (such as promotion posters at facilities)</li> <li>Human resource representatives</li> <li>Regular and ad-hoc communication meetings</li> <li>Employee voice channels, such as immediate response system, employee opinion box, wellness center, wellness website, etc.</li> <li>Ombudsman System</li> <li>Audit Committee Whistleblower System</li> </ul>
Shareholders & Investors	<ul style="list-style-type: none"> <li>Annual shareholder meeting</li> <li>Quarterly earnings conference call</li> <li>Investor conferences and meetings</li> <li>Telephone and email responses to investors' questions and feedback collection</li> <li>Annual reports, CSR reports, 20-F filings to US SEC, material announcements to Taiwan Stock Exchange, and corporate news on the Company's website</li> </ul>
Customers	<ul style="list-style-type: none"> <li>Annual customer satisfaction survey</li> <li>Customer quarterly business review meetings</li> <li>Customer audits</li> </ul>
Suppliers	<ul style="list-style-type: none"> <li>Supplier quarterly business review meetings</li> <li>Supplier questionnaire survey</li> <li>Supplier onsite audits</li> <li>Annual supply chain management forum</li> <li>Supplier ethics code awareness training</li> </ul>
Government	<ul style="list-style-type: none"> <li>Official correspondence</li> <li>Meetings (such as communication meetings or public hearings)</li> <li>Communication with government authorities through industry organizations, including the Association of Science Park Industries, Taiwan Semiconductor Industry Association, World Semiconductor Council, and Chinese National Federation of Industries</li> </ul>
Society	<ul style="list-style-type: none"> <li>Arts events in the communities</li> <li>Sponsorship of non-profit organizations to support educational projects</li> <li>Professorship endowments and student scholarships at universities</li> <li>Support of non-profit organizations and institutions via monetary and in-kind donation, as well as providing necessary manpower for a good cause</li> <li>Regular visits to National Museum of Science, Hsinchu Veterans Home, St. Teresa Children Center, Hsinchu Gaofeng Botanical Garden, Jacana Ecology Education Park, and other remote schools to provide volunteer services</li> <li>Annual volunteer activities in collaboration with TSMC fabs and divisions</li> </ul>

In April 2016, the Company launched its first Facebook fan page, a newly established two-way communication channel to introduce a variety of CSR activities provided by the TSMC Education and Culture Foundation, TSMC Volunteer Program and 17 fab/division volunteer initiatives on a weekly basis. This enables further understanding of the Company's social contribution to society.

TSMC believes that maintaining good communication with stakeholders not only helps the Company better understand economic, social and environmental challenges, but also creates value for the Company and society and promotes sustainable growth.

## Responsibilities of TSMC CSR Committee Members

Committee Members	Responsibilities	Stakeholders
Legal	Corporate Governance, Code of Conduct, Legal Compliance, Intellectual Property, Protection of Confidential Information	Government Employees Society
Customer Service	Customers Service and Satisfaction, Customer Trust, Customer Confidentiality	Customers
Materials Management	Materials and Supply Chain Risk Management, Supplier Management, Conflict Minerals, EICC	Suppliers
Quality and Reliability	Product Quality and Reliability, Product Recall Mechanism.	Customers
Research and Development	Innovation Management, Green Products	Employees Customers
Risk Management	Risk Management, Crisis Management, Emergency Response and Action Plan	Customers Employees Government Society Investors
Finance	Financial Disclosure, Dividend Policy, Tax Strategy	Government Investors
Investor Relations	Resolving Issues of Stakeholder Concern, Establishing Trusting Long-term Relationships, Effective Two-way Communication, Annual Report Production	Investors
Operations	Operational Eco-efficiency, Pollution Prevention, Water Resource Risk Management, Green Manufacturing	Customers Investors
Environment, Health, and Safety	Environmental Policy and Management System, Climate Change Mitigation and Adaption, Pollution Prevention, Energy Consumption Efficiency, Carbon Emissions and Carbon Rights Management, Product Environmental Responsibility, Response Mechanism for Environmental Issues, Environmental Spending, Green Supply Chain, Policy and Management Systems for Occupational Health and Safety, Workplace Health and Safety, Occupational Disease Prevention and Health Promotion, Communication of ESH Regulations	Employees Customers Government Society Suppliers Investors
Human Resources	Talent Recruitment and Retention, Employee Health and Safety, Employee Training and Development, Compensation and Benefits, Freedom of Association and Collective Bargaining, Labor Relations and Whistleblower Procedures, Labor Rights Violations and Reporting Procedures, Management of Working Hours, Child Labor	Employees
TSMC Education and Culture Foundation, TSMC Volunteer Society	Corporate Citizenship, Philanthropy, Community Relations	Society
Public Relations	Stakeholder Engagement, Mechanism for Reflecting Issues of Social Concern, Media Relations	Society

As the only semiconductor company chosen for the Dow Jones Sustainability World Indices for the past 16 consecutive years, TSMC believes that integrity is fundamental to any company's sustainability. From a CSR perspective, TSMC also believes that customer trust is enhanced if the Company follows the law, insists on transparency and shows good corporate governance. These practices, along with outstanding business results, mean investors will be more willing to invest in the Company over the long term and employees will be more likely to make a mutual commitment to the Company to fulfill its core values, leading to stronger coherence within the Company. At TSMC's urging, suppliers – both upstream and downstream – have been working together to strengthen environmental protection by building a green supply chain. With the engagement of all stakeholders, the Company's resources can be amplified to create even more value for society. In summary, carrying out TSMC's social responsibilities gives the Company greater competitive advantage and benefits all stakeholders.

## 2016 CSR Awards and Recognitions

Category	Organization	Awards and Recognitions
Overall CSR	Dow Jones Sustainability Indices (DJSI)	•Membership in the Dow Jones Sustainability World Index for the 16th consecutive year •RobecoSAM Sustainability Award - Gold Class
	MSCI Global Sustainability Indexes	•Selected as MSCI Global Sustainability Indexes component
	FTSE4Good Index	•Selected as FTSE4Good Emerging Index component
	Goldman Sachs, GS Sustain	•Selected as GS SUSTAIN Focus List companies, which incorporates global industry leaders
	R.O.C. Presidential Office	•R.O.C. Presidential Innovation Award
	Taiwan Institute of Sustainable Energy	Taiwan Corporate Sustainability Awards: •Taiwan Corporate Sustainability Awards No.1 for Domestic Corporates •Taiwan Top 50 Corporate Responsibility Report Awards – Electronics Industry – Gold Class •Sustainable Water Management Award •Climate Leader Award
	Barron's	•Selected as Top100 World's Most Admired Companies
	FORTUNE	•Selected as one of The World's Most Admired Companies
	Newsweek	•Selected as Newsweek Green Rankings Top Green Companies in the World
	Channel NewsAsia	•Selected as one of the most sustainable corporations in Channel NewsAsia Sustainability Ranking
	CommonWealth Magazine	•Excellence in Corporate Social Responsibility Award – Large cap – 2nd Place •Most Admired Company in Taiwan for the 21st consecutive year •Most admired entrepreneur in Taiwan
	Global Views Magazine	Corporate Social Responsibility Award: •Technology Industry Group - Model Award
	Cheers Magazine	•Most Admired Company for the New Generation
	Economy, Governance	Taiwan Stock Exchange
R.O.C. Ministry of Economic Affairs Bureau of Foreign Trade		•Outstanding Trade Contribution Award
R.O.C. Ministry of Economic Affairs Intellectual Property Office		•Ranked No.1 in Top 100 Patent Filers
PricewaterhouseCoopers		•Ranked No.1 in Taiwan by Pricewaterhouse Coopers Global Innovation 1,000 Study
China Credit Information Service		•Ranked No.1 in Profitability of large Taiwan Companies
Institutional Investor Magazine		•Best CEO (Technology/Semiconductor) - 1st Place (buy-side and sell-side) - All-Asia •Best CEO (Technology/Semiconductor) - 1st Place (buy-side) - All-Asia •Best CEO (Technology/Semiconductor) - 1st Place (sell-side) - All-Asia •Best CFO (Technology/Semiconductor) - 1st Place (buy-side and sell-side) - All-Asia •Best CFO (Technology/Semiconductor) - 1st Place (buy-side) - All-Asia •Best CFO (Technology/Semiconductor) - 2nd Place (sell-side) - All-Asia •Best Investor Relations (Technology/Semiconductor) - 1st Place (buy-side and sell-side) - All-Asia •Best Investor Relations (Technology/Semiconductor) - 1st Place (buy-side) - All-Asia •Best Investor Relations (Technology/Semiconductor) - 1st Place (sell-side) - All-Asia •Best Investor Relations Professional (Technology/Semiconductor) - 1st Place (buy-side and sell-side) - All-Asia •Best Investor Relations Professional (Technology/Semiconductor) - 1st Place (buy-side) - All-Asia •Best Investor Relations Professional (Technology/Semiconductor) - 1st Place (sell-side) - All-Asia •Best Analyst Days (Technology/Semiconductor) - 1st Place (buy-side and sell-side) - All-Asia •Best Website (Technology/Semiconductor) - 1st Place (buy-side and sell-side) - All-Asia
IR Magazine		•Global Top 50 Gold Rank No.1 •Global Top IRO - Five Winning IROs •Global Top Corporate Governance - Five Winning Companies •Best Use of Technology - Greater Asia •Best Corporate Governance - Greater Asia •Best in Sector: Technology - Greater Asia
Asiamoney		•Best Managed Company Large Cap in Taiwan
FinanceAsia		•FinanceAsia 20th Anniversary Platinum Awards: Best Company – in Taiwan
FORTUNE		•Selected as member of Fortune Global 500
Forbes		•Forbes Global 2000
Forbes Asia		•Fabulous 50
Nikkei		•Nikkei Asia 300 Indexes
World Export Controls Review (WorldECR Journal)		•Best Export Controls Compliance Team of the Year - Rest of the World

(Continued)



Category	Organization	Awards and Recognitions
Environment, Safety and Health	U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) certification	•“Gold” class certification – Fab 14B Manufacturing Facility and Office Building
	R.O.C. Ministry of the Interior “Ecology, Energy Saving, Waste Reduction and Health (EEWH)” certification	•“Diamond” class certification – Fab 12A Manufacturing Facility, Fab 12 Phase 6 Manufacturing Facility, Fab 14B Manufacturing Facility
	R.O.C. Environmental Protection Administration	•Excellence in Toxic Substance Management Award – Fab 2 and Fab 5 •Enterprise Green Procurement Award – Fab 2 and Fab 5, Fab 3, Fab 8, Fab 12A, Fab 14A, Fab 14B •Environmental Education Award – Fab 6, Fab 15A
	R.O.C. Ministry of Economic Affairs	•Excellence in Energy Conservation – Fab 12 Phase 6 •Excellence in Carbon Reduction Award – Fab 2 and Fab 5, Fab 8 •Green Factory Label – Fab 15A •Water Conservation Award – Fab 14B for two consecutive years
	R.O.C. Ministry of Labor	•Excellence in Labor Safety and Hygiene Award – Fab 12A
	Hsinchu Science Park Administration	•Water Conservation Award – Fab 2 and Fab 5 •Excellence in Energy Conservation – Fab 2 and Fab 5, Fab 3 •Excellence in Labor Safety and Hygiene Award – Fab 2 and Fab 5 •Excellence in Ammonia Nitrogen Reduction in Wastewater – Fab 12A, Fab 12 Phase 7
	Central Taiwan Science Park Administration	•Excellence in Labor Safety and Hygiene Award – Fab 15A
	Southern Taiwan Science Park Administration	•Excellence in Environmental Protection – Fab 6
	Hsinchu County Environmental Protection Bureau	•Enterprise Environmental Protection Evaluation – Fab 12 Phase 6
	Hsinchu City Environmental Protection Bureau	•Enterprise Green Procurement Award – Fab8, Fab 12A
	Tainan City Environmental Protection Bureau	•Enterprise Green Procurement Award – Fab 14A

## 7.2 Environmental, Safety and Health (ESH) Management

TSMC believes its environmental, safety and health practices must not only meet legal requirements, but should also measure up to or exceed recognized international best practices. TSMC’s ESH policies aim to reach the goals of “zero incident” and “sustainable development,” and to make TSMC a world-class company in environmental, safety and health management. The Company’s strategies for reaching these goals are to comply with regulations, promote safety and health, strengthen recycling and pollution prevention, manage ESH risks, instill an ESH culture, establish a green supply chain, and fulfill its related corporate social responsibilities.

All TSMC manufacturing facilities have received ISO 14001: 2004 certification for environmental management systems and OHSAS 18001: 2007 certification for occupational safety and health management systems and transferred environmental management system certificate to ISO 14001: 2015 in 2016. All fabs in Taiwan have also been TOSHMS (Taiwan Occupational Safety and Health Management System) certified since 2009.

TSMC strives for continuous improvement and actively seeks to enhance climate-change management, pollution prevention and control, power and resource conservation, waste reduction and recycling, safety and health management, fire and explosion prevention as well as to minimize the impact of earthquake damage, so as to reduce overall environmental, safety and health risks.

In 2006, in order to meet regulatory and customer needs for the management of hazardous materials, TSMC began to adopt the IECQ QC 080000 Hazardous Substance Process Management (HSPM) System. All TSMC manufacturing facilities have been QC 080000 certified since 2007. By practicing QC 080000, TSMC ensures that its products comply with regulatory and customer requirements, including the European Union’s “Restriction of Hazardous Substances (RoHS) Directive,” the EU’s “Registration, Evaluation, Authorization and Restriction of Chemicals (REACH),” the “Montreal Protocol on Substances that Deplete the Ozone Layer” (the halogen free in electronic products initiative), and Perfluorooctane Sulfonates (PFOS) restriction standards.

Since 2011, TSMC has adopted the ISO 50001 Energy Management System for the continuous improvement of energy conservation. TSMC’s Fab 12 Phase 4 data center is Taiwan’s first facility to earn the ISO 50001 certification for a high-density computing data center. As of 2016, TSMC has three fabs – Fab 12 Phase 4/5/6, Fab 14 Phase 3/4 and Fab 15 – that earned ISO 50001 certifications. Other TSMC fabs also implement energy management measures consistent with ISO 50001.

TSMC regularly communicates with suppliers and contractors regarding environmental, safety and health issues and encourages them to improve their ESH performance. In line with this policy, TSMC uses priority work management and self-management to govern work performed by contractors. TSMC requires contractors performing level-one high-risk operations to complete certification for technicians and to establish their own OHSAS 18001 safety and health management system. This promotion of self-management is aimed at increasing the sense of responsibility of TSMC’s contractors, with the goal of promoting safety awareness and technical improvement for all contractors in the industry.

TSMC collaborates with suppliers to improve the sustainability of the Company’s supply chain regarding ESH-related issues, such as environmental protection, safety and hygiene code compliance, daily management, fire protection, and conflict mineral management. TSMC not only performs ESH audits at its suppliers’ manufacturing sites but also proactively assists them with improving ESH performance.

Besides the requirement of ESH code compliance, energy/water saving and carbon management of TSMC’s supply chain are essential to the Company’s green supply chain ideals. Since 2009, TSMC has required suppliers to establish carbon inventory procedures. In 2015, TSMC calculated its carbon footprint and water footprint, which were certified by a third party for ISO 14067 and ISO 14046, respectively. TSMC not only provides such information to customers but also continue to promote carbon reduction and water conservation at TSMC and in the supply chain from a life-cycle point of view.

TSMC also monitors potential climate-change related risks in the supply chain, investigates the supply chain’s carbon emissions, electricity usage and water usage, and encourages suppliers to implement measures to save energy, reduce carbon emissions, conserve water and reduce waste. The ESH management programs of TSMC suppliers are tied to a sustainability index that includes three components: the Green Index, the Social Index and the Risk Index. The Green Index includes environmental management systems, regulatory compliance, hazardous substance management, conflict mineral investigation, greenhouse gas inventory and other green activities. The Social Index includes labor and ethical conduct. Both the Green and Social indices are consistent with the Electronic Industry Citizenship Coalition (EICC) Code of Conduct. The Risk Index includes safety and health management, fire prevention, natural disaster mitigation, IT interruption recovery, transportation reliability, supply chain management and business continuity planning. This sustainability index is applied to TSMC’s critical suppliers.

### 7.2.1 Environmental Protection

#### Greenhouse Gas (GHG) Emission Reduction

TSMC is an active participant in international environmental regulatory and protection programs. The Company has taken many measures to reduce its emission of GHGs. For example, TSMC endorsed a memorandum of understanding with the Taiwan Semiconductor Industry Association (TSIA), the Taiwan Environmental Protection Administration (EPA), and the World Semiconductor Council (WSC) to establish the corporate PFC emission reduction policy and action plans proactively, whereby the Company committed to reducing PFC emissions to 10% below the average of 1997 and 1999 by 2010, a commitment that it was proud to make and achieve.

TSMC is active in the WSC’s activities to set up a global voluntary PFC emissions reduction goal for the next ten years, and has incorporated past experience to develop best practices. The implementation of best practices has been adopted by the WSC as a major element of the 2020 goal. In 2013, in accordance with the “EPA Early Actions for Carbon Credit of Greenhouse Gases Reduction” regulation, TSMC applied for the recognition of greenhouse reduction from 2005 to 2011 that committed to the WSC and EPA, and received 5.28 million tons of carbon dioxide credits in 2015. Those carbon credits can be used to offset greenhouse gas emissions of new manufacturing facilities regulated by Environmental Impact Assessment (EIA) Act. The mitigation of climate-change risk supports the Company’s sustainable operations.

The “Greenhouse Reduction and Management Act” established by Taiwan EPA has been in effect since July 1, 2015. The related sub-regulations will be established and announced soon, and TSMC is preparing to take action. In 2005, TSMC was the semiconductor leading company to complete the GHG inventory program and take a complete inventory of its GHG emissions and to gain ISO 14064 certification. The purpose of the inventory is to serve as a baseline reference for TSMC’s strategy to reduce GHG emissions, to meet domestic regulatory requirements, and to prepare for carbon trading and corporate carbon asset management. All TSMC facilities conduct an annual GHG inventory. The inventory shows that the major direct GHG emissions are perfluorinated compounds (PFCs), which are used in the semiconductor manufacturing process. The primary indirect GHG emission is electricity consumption.

Thermal power generators, the major source of electricity in Taiwan, emit larger amounts of carbon dioxide (CO<sub>2</sub>) than any other power generators. Because 70% of GHG emission comes from electricity consumption, TSMC emphasizes energy saving and carbon reduction initiatives. TSMC has not only adopted energy-conserving designs in its manufacturing fabs

and offices, but has also continuously improved the energy efficiency of its facilities during operation. These efforts simultaneously reduce both carbon dioxide gas emissions and costs.

Since 2015, TSMC has actively participated in the R.O.C. Ministry of Economic Affairs' voluntary "Green Power Purchasing Program". In 2016, TSMC purchased 200 million kilowatt hours (kWh) of green power that made up nearly 20% of the Taiwan Power Company's total green power available for purchase under the program in that year. Since green power is generated with zero carbon emissions, the purchase of 200 million kWh of green power will eliminate over 100 million kilograms of CO<sub>2</sub> emissions, equivalent to the carbon absorbed by 10 million trees in one year. TSMC hopes that by supporting Taiwan's renewable energy efforts, it can continue to pursue sustainability, promote a low-carbon environment, and reduce the impact of global warming.

#### Air and Water Pollution Control

The Company has installed effective air and water pollution control equipment in each wafer fab to meet regulatory emissions standards. In addition, TSMC maintains backup pollution control systems, including emergency power supplies, to lower the risk of pollutant emission in the event of equipment failure. TSMC centrally monitors the operations of its air and water pollution control equipment around the clock and treats system effectiveness as an important tracking item to ensure the quality of emitted air and discharged water.

To make the most effective use of Taiwan's limited water resources, all TSMC fabs strive to increase water reclamation rates by adjusting the water usage of manufacturing equipment and improving wastewater reclamation systems. All fabs meet or exceed the process water reclamation rate standard of the Science Park Administration. New fabs are able to reclaim more than 85% of process water, and outperforming most semiconductor fabs around the world. TSMC also makes every effort to reduce non-manufacturing-related water consumption, including water used in air conditioning systems, sanitary facilities, cleaning and landscaping activities and kitchens. TSMC uses an intranet website to collect and measure water recycling volumes company-wide.

Since water resources are inherently local, TSMC shares its water saving experiences with other semiconductor companies through the Association of Science-Based Industrial Park to promote water conservation in order to achieve the Science Park's goals and ensure a long-term balance of supply and demand.

#### Waste Management and Recycling

The Company has a designated unit responsible for waste recycling and disposal. To meet the goal of sustainable resource utilization, TSMC's priorities are: (1) reduce process waste, (2) increase onsite reuse, and (3) increase offsite recycling. The last option consists of treatment or disposal. To achieve raw material reduction, resource recycling and the goal of zero waste, TSMC built an in-house waste sulfuric acid pre-treatment system as electronic grade sulfuric acid can be used as waste water treatment agents after the wafer fabrication process. In order to track waste flow and ensure that all waste is treated or recycled legally and properly, TSMC carefully selects waste disposal and recycling contractors and performs annual audits of certification documents and site operations. TSMC also takes proactive steps to strengthen vendor auditing effectiveness. For example, all waste transportation contractors were asked and agreed to join the "GPS Satellite Fleet" so that all the cleanup transportation routes and abnormal stays for all trucks can be traced. In addition, all waste recycling and treatment vendors have installed closed-circuit TV systems at operating sites to monitor and audit the waste handling. Meanwhile, TSMC also conducts an ongoing survey of recycling product tracking. These actions were taken to ensure lawful and proper waste recycling and treatment, and in 2016 TSMC's fabs in Taiwan achieved a 95% waste recycling rate, with a landfill rate below 1% for the seventh consecutive year.

#### Environmental Accounting

The purpose of TSMC's environmental accounting system is to identify and calculate environmental costs for internal management. At the same time, the Company can also evaluate the savings or economic benefits of environmental protection programs so as to promote cost-effective programs. While environmental expenses are expected to continue growing, environmental accounting can help TSMC manage these costs more effectively. TSMC's environmental accounting measures various environmental costs, establishes independent environmental account codes, and provides these to all units for use in annual budgeting. The Company's economic benefit evaluation calculates cost savings for reduction of energy, water or waste and benefits from waste recycling in accordance with its environmental protection programs.

The environmental benefits disclosed in this report include real income from projects such as waste recycling and savings from major environmental projects. In 2016, 184 environmental projects of TSMC fabs were completed and the total benefits, including waste recycling, were more than NT\$1,168 million.

#### 2016 Environmental Cost of TSMC Fabs in Taiwan

Unit: NT\$ thousands

Classification	Description	Investment	Expense
1. Direct Costs for Reducing Environmental Impact			
(1) Pollution Control Cost	Fees for air pollution control, water pollution control, and others	7,987,837	3,621,017
(2) Resource Conservation Cost	Costs for resource (e.g. water) conservation	1,686,996	-
(3) Industrial Waste Disposal and Recycling	Costs for waste treatment (including recycling, incineration and landfill)	-	1,207,390
2. Indirect Cost for Reducing Environmental Impact (Environmental Managerial Cost)	(1) Cost of training (2) Environmental management system and certification expenditures (3) Environmental impact measurement and monitoring fees (4) Environmental protection product costs (5) Environmental protection organization fees	94,748	242,518
3. Other Environmental Costs	(1) Costs for decontamination and remediation (2) Environmental damage insurance fees and environmental taxes and expenses (3) Costs related to environmental settlement, compensations, penalties and lawsuits	-	100
Total		9,769,581	5,071,025

#### 2016 Environmental Efficiency of TSMC Fabs in Taiwan

Unit: NT\$ thousands

Category	Description	Efficiency
1. Cost Savings of Environmental Protection Projects	Energy savings: completed 61 projects	227,000
	Water savings: completed 16 projects	18,070
	Waste reduction: completed 107 projects	503,000
2. Real Income from Industrial Waste Recycling	Recycling of used chemicals, wafers, targets, batteries, lamps, packaging materials, paper cardboard, metals, plastics, and other waste	420,000
Total		1,168,070

#### Green Building and Green Factory

Since 2006 TSMC has adopted standards from both the Taiwan "Green Building" and the evaluation of the U.S. Green Building Council - Leadership in Energy and Environmental Design (LEED) for new fab and office building designs to achieve better energy and resource efficiency than conventional designs. During this time, TSMC has also continued to upgrade existing office buildings to comply with the LEED standard each year. From 2008 to 2016, 21 of TSMC's fabs and office buildings have achieved LEED certifications (three platinum-class and 18 gold-class). Meanwhile, TSMC also received three Taiwan Intelligent Building diamond class certifications and 15 Taiwan EEWH (Ecology, Energy Saving, Waste Reduction and Health) diamond class certifications.

TSMC believes that more manufacturing companies should convert their facilities into green factories to improve the environment and lower construction costs. Therefore, the Company freely shares its practical experience with industry, government and academia. As of the end of 2016, 10,245 visitors from 269 different industry, government, academic and general community groups had contacted TSMC to gain an understanding of the Company's green factory practices. Since 2009, TSMC has led the industry in support of the Taiwan government's "Green Factory Labeling System," a system that includes "Clean Production Evaluation" and "Green Factory Evaluation". TSMC received Taiwan's first "Green Factory Label" and seven labels in total for Fab 12 Phase 4, Fab 14 Phase 3 and Phase 4, Fab 12 Phase 5 and Phase 6, Fab 15 Phase 1 and Phase 2 and Fab 15 Phase 3 and Phase 4.

#### 7.2.2 Green Products

TSMC collaborates with its upstream material and equipment suppliers, design ecosystem partners and downstream assembly and testing service providers to minimize environmental impact. We reduce the resources and energy consumed for each unit of production and are able to provide more advanced, power efficient and ecologically sound products, such as lower-power-consumption chips for mobile devices, high-efficiency LED driver chips for flat panel display backlighting, indoor/outdoor solid state LED lighting, "Energy Star" certified low standby AC-DC adaptors chips, and high-efficiency DC brushless motor chips, etc. By leveraging TSMC's superior energy-efficient technologies, these chips support sustainable city infrastructure, greener vehicles, smart

girds, and so on. In addition to helping customers design low-power, high-performance products to reduce resource consumption over the product's life cycle, TSMC's green manufacturing practices provide additional "Green Value" to customers and other stakeholders.

TSMC-manufactured ICs are used in a broad variety of applications covering various segments of the computer, communications, consumer, industrial and other electronics markets. Through TSMC's manufacturing technologies, customers' designs are realized and their products are incorporated into people's lives. These chips, therefore, make significant contributions to the progress of modern society. TSMC works hard to achieve profitable growth while providing products that add environmental and social value. Listed below are several examples of how TSMC-manufactured products significantly contribute to the environment and society.

### Environmental Contribution by TSMC Foundry Services

#### 1. Continue to Drive Technology to Lower Power Consumption and Save Resources

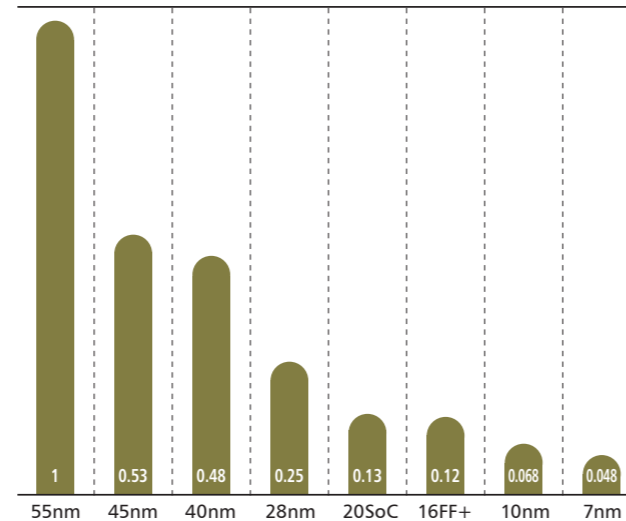
- TSMC continues to drive the development of advanced semiconductor process technologies to support customer designs that result in the most advanced, energy-saving and environmentally friendly products to improve sustainability. In each new technology generation, circuitry line widths shrink, making transistors smaller and reducing product power consumption.
- TSMC has quickly ramped up its 28nm and beyond technologies. Wafer revenue contribution from 28nm and below technologies grew significantly from 12% in 2012 to 54% in 2016. TSMC's objective is to continue R&D efforts in 28nm and beyond technologies and to increase the wafer revenue contribution from 28nm and beyond technologies, helping the Company achieve both profitable growth and energy savings.

TSMC Wafer Revenue Contribution from 28nm and Beyond Technologies

2012	2013	2014	2015	2016
12%	30%	42%	48%	54%

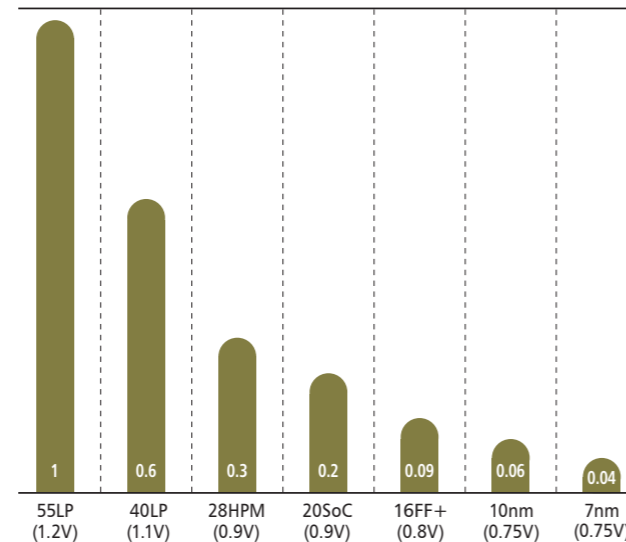
### Chip Die Size Cross-Technology Comparison

Die size reduces as line width shrinks



### Chip Total Power Consumption Cross-Technology Comparison

More power is saved as line width shrinks



#### 2. Provide Customers Leading Power Management IC Process with the Highest Efficiency

- TSMC's leading manufacturing technology helps customers design and produce green products. Power management ICs, the key components that regulate and supply power to all other IC components, are the most notable green IC products. TSMC helps customers produce industry-leading power management chips with more stable and efficient power supplies and lower energy consumption.

- In 2016, TSMC's HV/Power technologies collectively shipped more than 2.1 million 8-inch equivalent wafers to customers. In total, power management ICs manufactured by TSMC accounted for more than one-third of global computer, communication and consumer systems.

HV/Power Technologies Shipments (Unit: 8-inch equivalent wafer)

2012	2013	2014	2015	2016
>1,000K	>1,300K	>1,800K	>2,000K	>2,100K

#### 3. Green Manufacturing that Lowers Energy Consumption

TSMC continues to develop more advanced and efficient technologies to reduce energy/resource consumption and pollution per unit during the manufacturing process as well as power consumption and pollution during product use. In each new technology generation, circuitry line widths shrink, making circuits smaller and lowering the energy and raw materials consumed for per unit in manufacturing. In addition, the Company continuously provides process simplification and new design methodology based on its manufacturing excellence to help customers reduce design and process waste so as to produce more advanced, energy-saving and environmentally-friendly products. To see the total energy savings and benefits realized in 2016 through TSMC's green manufacturing, please refer to Environmental Accounting on pages 124-125 in this annual report.

### Social Contribution by TSMC Foundry Services

#### 1. Unleash Customers' Mobile and Wireless Chip Innovations that Enhance Mobility and Convenience

- The rapid growth of smartphones and tablets in recent years reflects strong demand for mobile devices, which, in turn, offer remarkable convenience. TSMC contributes significant value to these devices, including: (1) new TSMC process technology helps chips achieve faster computing speeds in a smaller die area, leading to smaller form factors for these electronic devices. In addition, TSMC SoC technology integrates more functions into one chip, reducing the total number of chips in electronic devices, again resulting in a smaller system form factor; (2) new TSMC process technology also helps chips consume less energy. People can therefore use mobile devices for a longer period of time; and (3) TSMC helps spread the growth of more convenient wireless connectivity such as 3G/4G and WLAN/Bluetooth, meaning people can communicate more efficiently and "work anytime and anywhere," significantly improving the mobility of modern society.
- Mobile computing related products, such as baseband, RF transceivers, application processors (AP), wireless local area

networks (WLAN), imaging sensors, near field communication (NFC), Bluetooth, and global positioning systems (GPS) among others, represented 52% of TSMC wafer revenue in 2016.

TSMC Wafer Revenue Contribution from Mobile Computing Related Products

2012	2013	2014	2015	2016
40%	44%	48%	51%	52%

Note: Mobile computing related products were re-classified in 2014.

#### 2. Unleash Customers' CIS (CMOS image sensor) and MEMS (micro electro mechanical systems) Innovations that Enhance Human Health and Safety

- In addition to smartphones, tablets and many other consumer electronic devices, TSMC-manufactured CIS and MEMS chips are widely used in medical treatment and health care applications. By leveraging the Company's advanced technologies, more and more chips for these applications are introduced to the market, providing major contributions to modern medicine. Customers' CIS and MEMS products are used in a number of advanced medical treatments as well as in preventative health care applications. Examples include early warning systems to minimize the injury from falls for the elderly, systems to detect physiological changes, car safety systems and other applications that greatly enhance human health and safety.

### 7.2.3 Safety and Health

#### Safety and Health Management

TSMC's safety and health management is built on the framework of the OHSAS 18001 system and adheres to the management principle of "Plan, Do, Check, Act" to prevent accidents, promote employee safety and health and protect Company assets. All TSMC fabs in Taiwan have also received TOSHMS (Taiwan Occupational Safety and Health Management System) certification.

Besides accident prevention, TSMC has established emergency response procedures to protect employees and contractors if a disaster should occur, as well as to prevent and/or reduce the negative impact on society and the environment. TSMC continually communicates with its suppliers to ensure that potential risk in the operation of production equipment is minimized, and rigorously follows safety control procedures when installing production equipment. The Company places stringent controls on high-risk operations and also evaluates the seismic tolerance of its facilities and equipment to reduce the risk of earthquake damage.



For epidemics, TSMC has established company-level prevention committees and procedures for emergency response to outbreaks of infectious diseases.

#### **Working Environment and Employee Safety and Health Protection**

TSMC's ESH policy is focused on establishing a safe working environment, preventing occupational injury and illness, keeping employees healthy, enhancing every employee's awareness and sense of accountability to ESH, and building an ESH culture. TSMC safety and health management operations apply to:

##### **• Equipment Safety and Health Management**

In addition to meeting regulatory requirements and internal standards, as well as mitigating ESH-related risks when building or upgrading facilities, TSMC also maintains procedures governing new equipment and raw materials, safety approvals for bringing new tools online, updating safety rules, seismic protection measures, and other safety measures.

TSMC requires that all new tools meet SEMI-S8 requirements and that appropriate supplementary control measures be taken to reduce ergonomic risk. Moreover, TSMC endeavors to automate 300mm front-opening unified pod (FOUP) transportation to prevent accumulative physical damage caused by repetitive manual handling of 300mm FOUPs. TSMC 300mm fabs have completed automatic transportation control.

##### **• Environmental, Safety and Health Evaluation of New Tools and New Chemical Substances**

As a technology leader in the global semiconductor industry, TSMC operates many diversified process tools and introduces new chemicals in the R&D stage. Before using those new tools and new chemicals, they are reviewed carefully by the "New Tools and New Chemical Review Committee". The purpose is to ensure that new tools are compliant with the semiconductor industry's safety standards (such as SEMI S2) and that new chemicals' environmental, safety and health concerns can be well controlled, including engineering controls, application of personal protection equipment, and operational safety training during storage, transportation, usage and disposal.

##### **• General Safety Management, Training and Audit**

All TSMC manufacturing facilities hold environmental, safety and health committee meetings on a monthly basis. TSMC adopts multiple preventive measures such as controls on high-risk work, contractor management, chemical safety management, personal protective equipment requirements, and safety audit management. In addition, TSMC maintains

detailed disaster response procedures and performs regular drills designed to minimize harm to employees and property, as well as the impact on society and the environment in the event of a disaster.

##### **• Working Environment Hazardous Factors Management**

TSMC conducts workplace hazard assessments and interventions to provide a comfortable and safe workplace to employees. TSMC also requires employees to use personal protective equipment (PPE) to prevent hazardous exposures.

TSMC performs semi-annual workplace environment assessments of physical and chemical hazards, including CO<sub>2</sub> concentration, illumination, noise, and hazardous chemical substances regulated by local laws. The Company performs exposure assessments and uses hierarchy management control for chemicals with potential health hazards since 2015. If abnormal measurements or events happen or an exposure assessment indicates there is an adverse health effect for employees, ESH professionals immediately conduct onsite observation and interventions to reduce the exposure to acceptable levels.

##### **• Emergency Response**

The planning and execution of an effective emergency response should identify high-risk events from risk assessment and be prepared for various scenarios. It should focus on continuous improvement and practice drills covering all potentially severe events. TSMC's emergency response plans include procedures for rapid-response crisis management and disaster recovery to potential incidents.

All TSMC fabs conduct major annual emergency response exercises and evacuation drills. TSMC's Tainan site fabs continue their spot drills, which have been recognized as industry best practices. TSMC's onsite service contractors also have to participate in emergency response planning and exercises to ensure cooperation in handling accidents and to effectively minimize any damage caused by disasters. At least every two years, each fab director invites fab management and support functions to participate in crisis management drills for potentially high-risk events such as earthquake, fire and flood (Tainan site).

In addition to the regular emergency response drills held by engineering and facilities departments each quarter, the Company's laboratory, canteen, dormitory, and shuttle bus personnel also hold emergency response drills to prepare for events such as earthquakes, chemical leakage, ammonia release, fires and automobile accidents.

##### **• Emerging Infectious Disease Response**

TSMC has a dedicated corporate ESH organization to monitor emerging infectious diseases around the world, to assess any potential impact on the workplace, and to provide an appropriate strategic response plan. In previous outbreaks (such as SARS in 2003 and the H1N1 influenza outbreak in 2009), TSMC convened the corporate influenza response committee to develop the Company's strategies. These strategies include educating employees in prevention and response, publishing guidelines for managers, establishing guidelines for employee sick leave due to flu, and installing alcohol-based hand sanitizers at appropriate locations. The Committee also monitors the status of employee leave due to illness and, at the same time, develops a continuous plan to address manpower shortages and minimize business impact.

TSMC believes that employees' physical and mental health is not only fundamental to maintaining normal business operations but also part of a corporation's responsibility.

##### **• Employee Physical and Mental Health Enhancement**

To protect and promote employee physical and mental health, TSMC fosters collaboration among the onsite industrial safety and environmental protection department, onsite medical personnel of the health center, and physicians of occupational medicine. TSMC strives to reduce cardiovascular disease that might be induced or aggravated by overwork, night work or shift work, and conducts maternal health protection programs as well. TSMC devotes significant resources to mental health awareness and related activities, which not only protect employees from hazards at work but also proactively promote employee health in general. In 2016, through planned personal health management, 45.6% of personnel diagnosed at high risk for cardiovascular disease shifted to low risk. 801 female employees participated in the maternal health program. For five consecutive years TSMC has held a series of physical and mental health activities. 691 employees have joined the weight-loss program, losing a total of 1,942 kilograms collectively. For smoking cessation, 115 employees participated with a success rate of 67% during a three-month period, exceeding the 33% goal set by the health promotion administration. 781 employees completed the sleep quality improvement program, which included one-on-one medical consultation to improve life quality.

##### **Supplier and Contractor Management**

###### **• Supplier Management**

As a means of enhancing its supply chain management, TSMC is committed to communicating with and encouraging its contractors and suppliers to improve their quality, cost effectiveness, delivery performance and sustainability on

environmental protection, safety and health. Through regular communication with senior managers, site audits and experience sharing, TSMC collaborates with major suppliers and contractors to enhance partnership and ensure continual improvement for better performance and increased joint contributions to society. As noted above, contractors performing high-risk activities must lay out clearly defined safety precautions and preventative measures. In addition, contractors working on high-risk engineering projects must establish OHSAS 18001 systems and the workers must successfully complete work skill training.

###### **• Supply Chain Sustainability**

TSMC works with its suppliers in several fields of sustainable development, such as greening the supply chain, carbon management for climate change, mitigation of fire risk, ESH management and business continuity plans for natural disasters.

Since becoming a full member of the Electronic Industry Citizenship Coalition (EICC) in 2015, TSMC has completed the adoption of the EICC Code of Conduct across the Company by performing self-assessments at its facilities worldwide and reviewing policies and procedures in the areas of labor, health and safety, environment, ethics, and management systems.

To enhance supply chain sustainability and streamline risk management, TSMC is committed to collaborating with its suppliers to maintain full compliance with Taiwan's environmental, safety, health and fire regulations, and to establish the necessary management capability as well as continuous enhancement.

TSMC is subject to the U.S. Securities & Exchange Commission (SEC) disclosure rule on conflict minerals released under Rule 13p-1 of the U.S. Securities Exchange Act of 1934. As a recognized global leader in the high-tech supply chain, the Company acknowledges its corporate social responsibility to strive to procure conflict-free minerals in an effort to recognize humanitarian and ethical social principles that protect the dignity of all people. To this end, TSMC has implemented a series of compliance safeguards in accordance with leading industry practices such as adopting the due diligence framework in the OECD's Model Supply Chain Policy for a Responsible Global Supply Chain of Minerals from Conflict-Affected and High Risk Areas issued in 2011.

TSMC is one of the strongest supporters of the Electronic Industry Citizenship Coalition (EICC) and the Global e-Sustainability Initiative (GeSI), and this will help the Company's suppliers source conflict-free minerals through

their jointly developed Conflict-Free Smelter Program (CFSP). TSMC has asked its suppliers to disclose and make timely updates to information on smelters and mines since 2011. TSMC encourages suppliers to source minerals from facilities or smelters that have received a “conflict-free” designation by a recognized industry group (such as the EICC). TSMC also requires those who have not received such designation to become compliant with CFSP or an equivalent third-party audit program. TSMC requires the use of tantalum, tin, tungsten and gold in its products that are conflict-free.

TSMC will continue to issue the supplier survey annually and require suppliers to improve and expand their disclosure to fulfill regulatory and customer requirements. For further information, please see the Company’s Form SD filed with the U.S. SEC. ([http://www.tsmc.com/english/investorRelations/sec\\_filings.htm](http://www.tsmc.com/english/investorRelations/sec_filings.htm))

### 7.3 TSMC Education and Culture Foundation

The TSMC Education and Culture Foundation (TSMC Foundation), led by TSMC Vice Chairman F.C. Tseng, who serves as the TSMC Foundation’s chairman, was established in 1998 to make CSR contributions. In 2016, the TSMC Foundation contributed over NT\$75.81 million to various projects in minority education, humanity education, arts promotion, and so on, in order to narrow the urban-rural gap and uplift society.

#### Focus on Minority Education

**Corporate Contributions to Bridge the Urban-Rural Gap**  
Industrialization, informatization and globalization are spurring growth and development in cities and urban areas, which widens the cultural, educational and digital-resource gap with rural regions. Cooperating with several social groups, non-governmental organizations and educational institutions, the TSMC Foundation provided resources of the arts, sciences, reading and digital education to help the children at the bottom of the society move upward.

Reading brings knowledge and knowledge is power. In 2004, the TSMC Foundation began supporting “Hope Reading” of the CommonWealth Foundation, which each year donates 100 good books to 200 high schools and primary schools in Taiwan’s remote townships. Over the past 13 years, more than 240,000 children have been helped with more than 210,000 books. To respond to the needs of the digital era, in 2016 the TSMC Foundation further sponsored “Hope Reading 2.0,” which, in addition to book donation, selects 6 merit schools and 5 benchmark schools, and provides each class 2 tablets

and each student in third to sixth grades with one tablet, respectively, for a total of 265 tablets in all. With the help of other education partners, the TSMC Foundation will also implement e-learning systems to build up the reading and e-learning culture with the aid of distance courses and online community reading platforms.

The TSMC Foundation also emphasizes aesthetics and science education. “TSMC Aesthetic Tour” and “TSMC Science Tour,” launched in 2003 and 2010, respectively, take children from remote townships throughout the country to visit the National Palace Museum, the Taipei Fine Arts Museum and the science museums in northern, central and southern Taiwan. In 2016, more than 3,000 educators and students from rural schools in 17 counties participated in these tours. To date, more than 97,000 students from over 200 rural primary schools have improved their aesthetic view and inspired their scientific interests.

Besides, the TSMC Foundation has strengthened its cooperation with Junyi Academy and Boyo Social Welfare Foundation, by providing for free qualified digital learning tools and tutors to help rural students in their study regardless of financial limitation. For economically disadvantaged students in top universities, the TSMC Foundation sponsors the “Rising Sun Plan” of National Tsing Hua University and the “Sunflower Plan” of National Central University. In 2016, the TSMC Foundation provided 19 students with NT\$1.62 million in scholarships and launched textbook donations to lighten their economic burden and enable them to focus on their studies.

#### Building Educational Platforms

##### Fostering Multi-Competence Talents and Helping Youth Reach Their Dreams

To enhance student interests in the sciences and humanities, the TSMC Foundation organizes national science contests, science camps and humanity activities. These events build a stage for the youth, giving them the opportunity not only to showcase their talents but also to discover themselves and to consider their future.

To encourage those in the younger generation to chase their dreams, the TSMC Foundation launched the first “TSMC Dream Builders of Youth Project”. More than 166 teams composed of 500 college students from Taoyuan, Hsinchu and Miaoli, applied for the project and, after three-stage reviews by professional committees, eight teams were awarded prizes totaling NT\$3 million. Within a year, they will devote themselves in various programs, including agricultural recreation, environmental sustainability, humanities promotion

and technology startup to demonstrate their creativity and potential.

The TSMC Foundation has held the “TSMC Youth Literature Award” and “TSMC Youth Calligraphy Contest” since 2004 and 2008, respectively, to encourage young people to develop proficiency in literature and calligraphy. In addition to novel and poetry, prose was included in the literature award as another category for literary creation, and a record 628 works were submitted. For the calligraphy contest, collaborating with National Palace Museum, the TSMC Foundation organized three school workshops, which attracted more than 800 attendees, including the contesters of regular and clerical script, semi-cursive and cursive script, and seal carving. The TSMC Foundation also gives community residents a chance to appreciate the beauty of literature and calligraphy by school activities, publishing the works of prize winners and organizing touring exhibitions of the contests.

According to the Programme for International Student Assessment, Taiwanese students excel in mathematics and sciences but are less proficient at logical thinking, argumentation and presentation. Therefore, the TSMC Foundation sponsors The Center for Advanced Science Education at National Taiwan University to hold the competition, “TSMC Cup – Competition of Scientific Short Talk”. The competitors have to read a wide variety of scientific materials, write popular scientific articles, give scientific speeches and answer the questions from their opponents, in order to improve their science presentation skills. In 2016, echoing the United Nations’ theme, “International Year of Pulses,” the competition focused on pulses and invited 223 teams composed of senior high school students to read well-respected books, write essays and deliver short scientific talks on the subjects of science, nutrition, environment and agriculture in the preliminary and semi-final workshops and the contest, with the ultimate goal of cultivating in-depth knowledge and mastering presentation skills.

The TSMC Foundation also continued to support three science talent camps: Wu Chien-Shiung Science Camp, Wu Ta-Yu Science Camp and Madame Curie Senior High School Chemistry Camps, to provide senior high school students with the opportunity to meet and learn from world-class scientists with the objective of inspiring the students and helping them realize their potential.

#### Promoting the Arts and Culture

##### Spreading the Seeds of the Fine Arts and Humanities for Community Development

The TSMC Foundation has long played the role of “fine arts planter,” spreading the seeds of the fine arts in the society. In addition to actively supporting prominent international and Taiwanese artistic performances, the TSMC Foundation has continued to organize the “TSMC Hsin-Chu Arts Festival” at TSMC’s site communities, Hsinchu, Taichung and Tainan, to present a broad spectrum of performances to encourage the community’s interest in the arts.

In 2016, the commemoration of 400th anniversary of the death of William Shakespeare, in response to the cultural event, the festival invited Contemporary Legend Theatre, Corny Chicken Theatre and Prof. I-Fan Ho of National Hsinchu University of Education to perform novel musical, children’s concert and drama lectures for community residents to better understand Shakespeare’s literature. The festival also invited the young violinist Richard Lin to perform three concerts in northern, central and southern Taiwan, to promote prominent Taiwanese artists. Furthermore, the TSMC Foundation hosted the first “In Spring Chanting Poetry Festival” and invited communities and schools at Taoyuan, Hsinchu and Miaoli to chant poetry and enjoy the beauty of literature. The “2016 TSMC Hsinchu Arts Festival” arranged 53 fine arts activities, attracting over 20,000 attendees.

The TSMC Foundation also supports various Taiwanese art groups with actual deed. In 2016, the TSMC Foundation sponsored the opera concert of Verdi’s “Othello,” a semi-stage opera concert with sound effects and projected animations made by National Symphony Orchestra. It was jointly developed with Mary Birnbaum, an opera and theater director of the Juilliard School in U.S. “Othello” attracted more than 3,500 fans to enjoy the music and was very well reputed. The TSMC Foundation has a long-term commitment to relive historic buildings and to promote Chinese Traditional Classics. Since 2008, the TSMC Foundation has invited Professor Yih-yun Hsin to teach traditional Chinese philosophy and wisdom through broadcast programs on the IC Radio Broadcasting Station. The programs are extremely popular and followed by Chinese audiences all over the world. The TSMC foundation also collaborates with Literary Supplement of United Daily News to organize monthly literary lectures, inviting authors to read their works in the Sun Yun-Suan Memorial Museum, to offer community residents a chance to experience the charm of literature up close and in person.

## 7.4 TSMC Volunteer Program

Taiwan Semiconductor Manufacturing Company (TSMC) values the corporate social responsibilities. In such principle, the TSMC volunteer program, led by its president Mrs. Sophie Su-fen Chang, encourages employees to participate in happy and smart volunteer activities by holding the goal “selected program, long-term dedication” and encourages employees to optimize their work-life balance.

The TSMC Volunteer Program collectively plans various volunteer services and invites employees and their families to join volunteer services. There are six major programs:

**TSMC Volunteer Docent Program:** For knowledge sharing, one of the important ways of providing corporate services and responding to society. Through knowledge communication and development, the public may further recognized their surrounding environment. Moreover, they may create the power to change society by inspiring future masters. Service locations: “National Museum of Natural Science” in Taichung and “TSMC Museum of Innovation” in Hsinchu.

**TSMC Book Reading Volunteer Program:** Since 2004, this program has continuously sponsored the “Hope Reading” program of the Commonwealth Publishing Group. The program donates 20,000 books to 200 remote schools every year as bridge to the world built for disadvantaged students. Service locations: Hsinchu County: Lu Fong Elementary School, Jing Ping Elementary School, Chao Tung Elementary School, Fu Hsin Elementary School, Taichung City: Xi Wei Elementary School, and Tainan City: Song Lin Elementary School, Guang Jung Elementary School and Shu Lin Elementary School.

**TSMC Energy-Saving Volunteer Program:** The program is organized by employees of the Company with professional energy saving knowledge to assist schools at all levels on energy-saving assessment and improvement. The service locations cover: Taipei, Hsinchu, Taichung, Tainan and Kaohsiung such areas, providing power consumption safety and professional energy saving suggestions.

**TSMC Community Volunteer Program:** “Typhoon Morakot Project Team” was officially transformed into the “TSMC Community Volunteer Program” after the disaster in 2010 and moving toward people who need the help most. Following the aging society and low birth rate, the elderly and children are groups that TSMC community volunteers pay attention to. Through regular activities and gatherings, the volunteers work closely with elderly and children. Service locations: Hsinchu Veterans Home, and Hsinchu St. Teresa Children Center.

**TSMC Ecology Volunteer Program:** TSMC is devoted to the protection of the environment. The Company reserves land for ecological projects at every new fab, and applies multilevel ecological engineering methods, which include planting native tree species and bird/butterfly-attracting plants, providing habitats and foraging places for animals. These are aimed at creating a biodiversity environment and protecting the environment around the fab. Service locations: Hsinchu Fab 12B, Taichung Fab 15, Tainan Jacana Ecology Education Park

**TSMC Fab/Division Volunteer Program:** Exercising corporate social responsibility is always an extremely important part of returns and services provided by TSMC to the public. With support of executive officers and the enthusiastic response of employees, the fab/division volunteer program was created in 2013. It has shaped CRS culture inside the Company and “Do good” becomes popular among the fabs. The warm and strong figures of TSMC volunteers are everywhere; activities-include: environmental protection, promotion of energy conservation, caring for the disadvantaged, promotion of education, help for farmers and workers, and charitable donations to protect Taiwan silently.

## 7.5 TSMC i-Charity

“TSMC i-Charity” is an interactive online platform launched in 2014 for employees to proactively take part in philanthropic activities and give back to society. The intranet opens a channel for TSMC employees to propose caring projects, share results, suggest new ideas and participate in philanthropic events directly and in a timely manner.

In 2016, 6,826 attendees participated in the following projects, as over NT\$12 million in contributions were received:

- Light up the Tribe with Love-Construction for Hualien Xiu-Lin “Little Sun” School
- Caring for Disadvantaged Children- Call for Hualien Volunteer
- TSMC Bookcase- Caring for Disadvantaged Children with Knowledge and Love
- Tai Tung St. Mary Hospital Reconstruction
- School Building, Repairing and Construction for Tainan Hsin-Sheng Elementary School
- Jun-Yi Academy Platform
- Teach for Taiwan
- School Building Repair Construction for National Taitung Jr. College
- Build up the Dreams with Love- Yuan-Dong Junior High School
- Healthy program for west Taiwan - Early lung cancer detection with Low-Dose Computed Tomography

With this interactive platform, TSMC hopes to maintain its commitment to society and encourage employees to join in efforts to care for and give back to society in all ways.

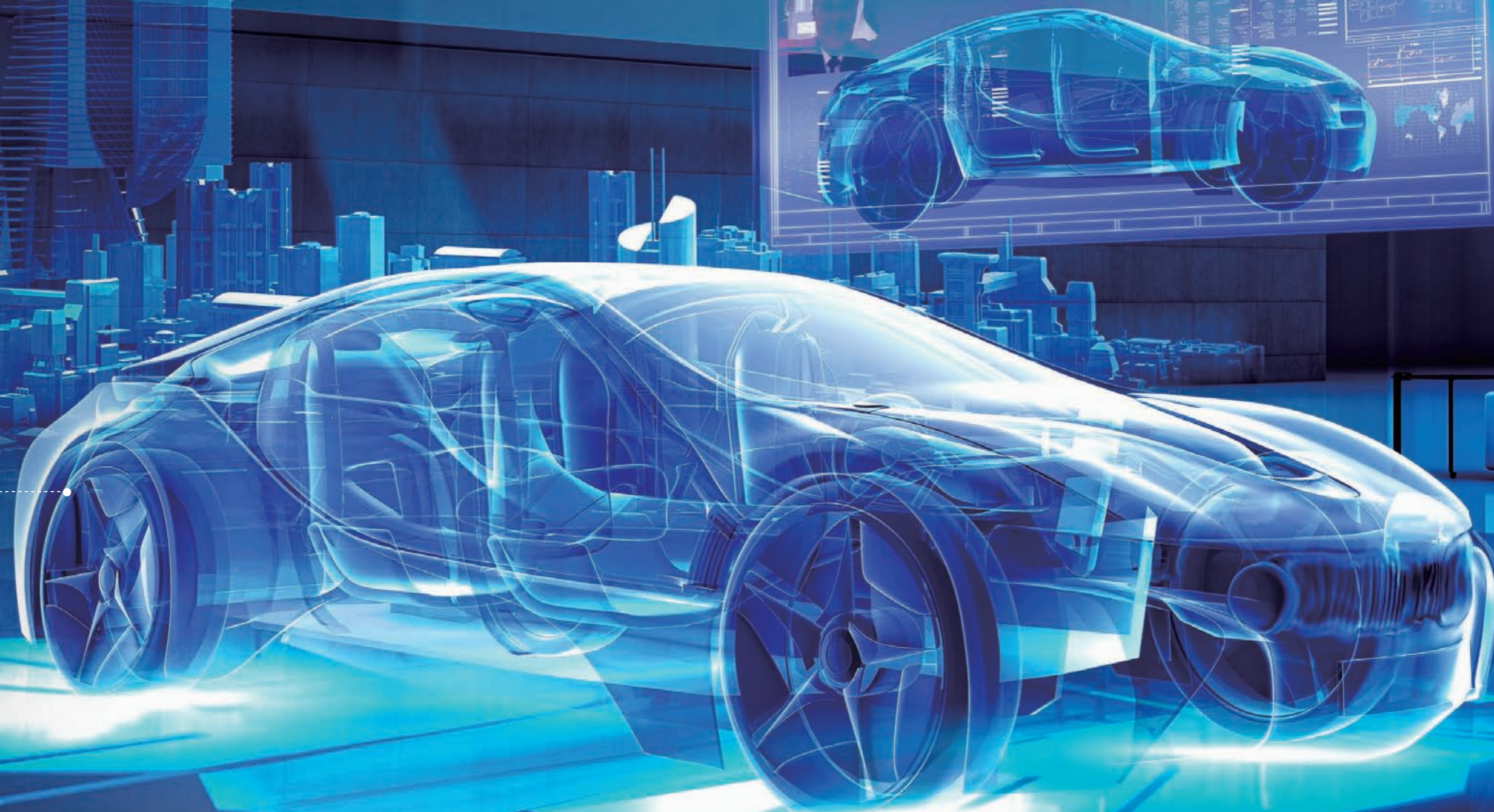
## 7.6 Social Responsibility Implementation Status as Required by the Taiwan Financial Supervisory Commission

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Summary	
1. Implementation of Corporate Governance (1) Does the Company have a corporate social responsibility policy and evaluate its implementation?  (2) Does the Company hold regular CSR training?  (3) Does the Company have a dedicated (or ad-hoc) CSR organization with Board of Directors authorization for senior management, which reports to the Board of Directors?  (4) Does the Company set a reasonable compensation policy, integrate employee appraisal with CSR policy, and set clear and effective incentive and disciplinary policies?	V		(1) Please refer to “7. Corporate Social Responsibility” on pages 118-133 of this Annual Report.  (2) Please refer to “3.5 Code of Ethics and Business Conduct” on pages 49-53 of this Annual Report.  (3) Please refer to “7. Corporate Social Responsibility” on pages 118-133 of this Annual Report.  (4) Social responsibility is regarded as an integral part of corporate governance by TSMC. TSMC’s fair compensation policy is set with consideration of the goals of the Company’s corporate governance and operation; corporate social responsibility is included as part of its indices/indices. For further details, please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report.	None
2. Environmentally Sustainable Development (1) Is the Company committed to improving resource efficiency and to the use of renewable materials with low environmental impact?  (2) Has the Company set an Environmental management system designed to industry characteristics?  (3) Does the Company track the impact of climate change on operations, carry out greenhouse gas inventories, and set energy conservation and greenhouse gas reduction strategy	V		Please refer to “7.2.1 Environmental Protection” on pages 123-125 of this Annual Report.	None
3. Promotion of Social Welfare (1) Does the Company set policies and procedures in compliance with regulations and internationally recognized human rights principles?  (2) Has the Company established appropriately managed employee appeal procedures?  (3) Does the Company provide employees with a safe and healthy working environment, with regular safety and health training?  (4) Has the Company established a mechanism for regular communication with employees and use reasonable measures to notify employees of operational changes which may cause significant impact to employees?  (5) Has the Company established effective career development training plans?  (6) Has the Company set policies and consumer appeal procedures in its R&D, purchasing, production, operations, and service processes?  (7) Does the Company follow regulations and international standards in the marketing and labelling of its products and services?  (8) Does the company evaluate environmental and social track records before engaging with potential suppliers?  (9) Does the Company’s contracts with major suppliers include termination clauses if they violate CSR policy and cause significant environmental and social impact?	V		(1) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report.  (2) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report.  (3) Please refer to “7.2.3 Safety and Health” on pages 127-130 of this Annual Report.  (4) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report.  (5) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report.  (6) Not applicable as TSMC is not an end product manufacturer.  (7) Not applicable as TSMC is not an end product manufacturer.  (8) Please refer to “Supplier and Contractor Management” on page 129-130 of this Annual Report.  (9) Please refer to “Risks Associated with Purchase Concentration” in 6.3.3 Operational Risks of this Annual Report.	None
4. Enhanced Information Disclosure Does the Company disclose relevant and reliable CSR information on its website and the Taiwan Stock Exchange website?	V		TSMC has published a “Corporate Social Responsibility Report” since 2008, and discloses this on the Company’s website ( <a href="http://www.tsmc.com/english/csr/index.htm">http://www.tsmc.com/english/csr/index.htm</a> ).	None
5. If the company has established its corporate social responsibility code of practice according to “Listed Companies Corporate Social Responsibility Code of Practice,” please describe the operational status and differences.  TSMC follows the Corporate Social Responsibility Policy set by the Chairman, Dr. Morris Chang. For our corporate social responsibility operational status, please refer to “7. Corporate Social Responsibility” on pages 118-133 of this Annual Report and our corporate social responsibility related information in our website: <a href="http://www.tsmc.com/english/csr/index.htm">http://www.tsmc.com/english/csr/index.htm</a>				
6. Other important information to facilitate better understanding of the company’s implementation of corporate social responsibility:  Please refer to TSMC’s website for its corporate social responsibility implementation status: <a href="http://www.tsmc.com/english/csr/index.htm">http://www.tsmc.com/english/csr/index.htm</a>				
7. Other information regarding “Corporate Responsibility Report ” which is verified by certifying bodies:  TSMC’s Corporate Social Responsibility Report is in accordance with the GRI G4 guidelines comprehensive option and verified by certifying bodies.				



# TSMC Nanjing Company Limited

TSMC Nanjing Company Limited was established in May 2016 to provide 12-inch wafer capacity, and is scheduled to commence production of 16-nanometer process technology in the second half of 2018.



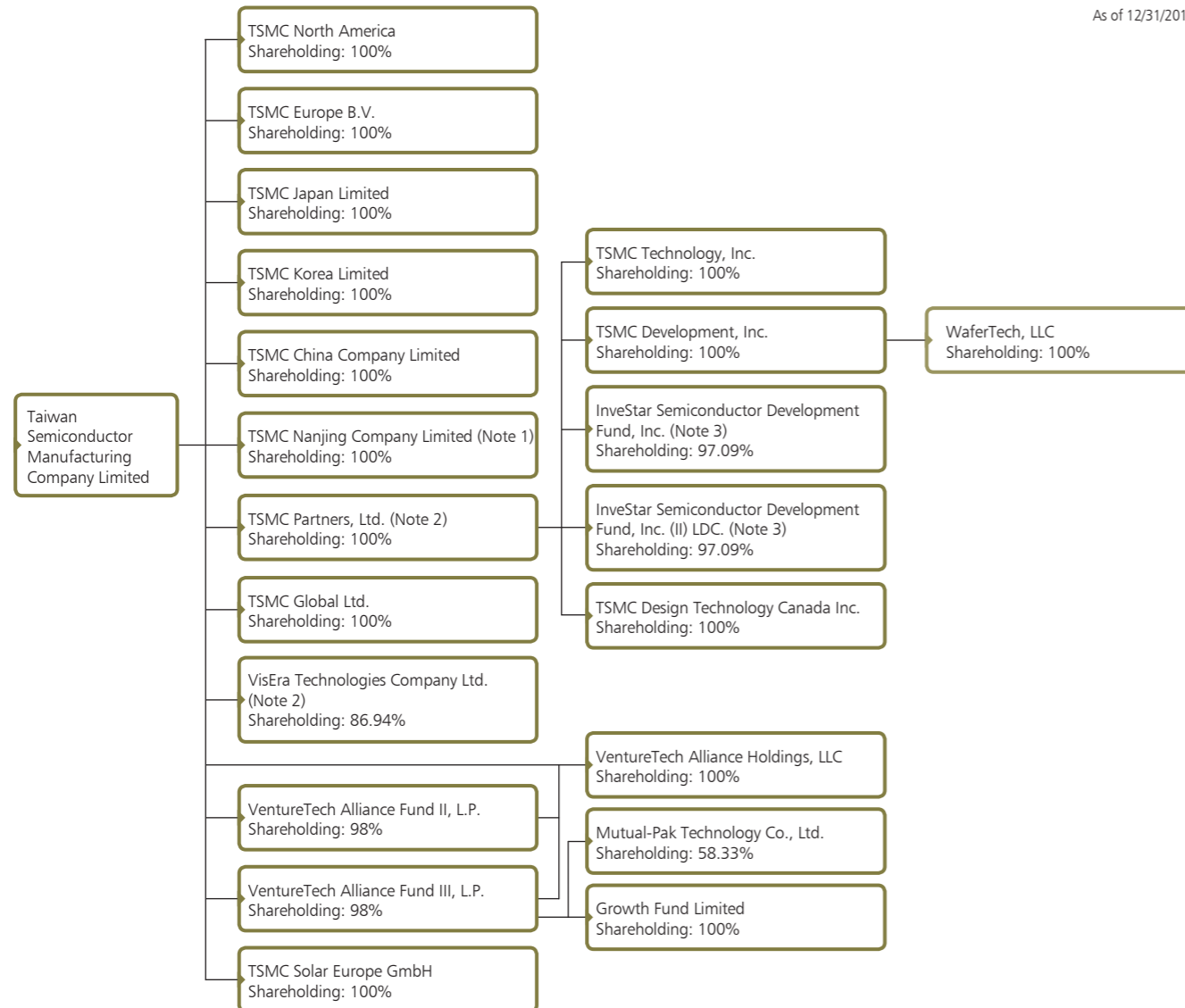


# Subsidiary Information and Other Special Notes

## 8.1 Subsidiaries

### 8.1.1 TSMC Subsidiaries Chart

As of 12/31/2016



Note 1: TSMC Nanjing Company Limited was established in May 2016.

Note 2: To simplify investment structure, VisEra Technologies Company Ltd. owned by VisEra Holding Company was transferred to TSMC in August 2016. In October 2016, VisEra Holding Company was incorporated into TSMC Partners, Ltd., the subsidiary of TSMC.

Note 3: InveStar Semiconductor Development Fund, Inc and InveStar Semiconductor Development Fund, Inc. (II) LDC. have started the liquidation procedures.

### 8.1.2 Business Scope of TSMC and Its Subsidiaries

TSMC and its subsidiaries strive to provide the best foundry services in the industry. Subsidiaries in North America, Europe, Japan, China and South Korea are dedicated to serving TSMC customers worldwide. WaferTech in the United States and TSMC China provide additional 8-inch wafer capacity. TSMC Nanjing will begin to provide additional 12-inch wafer capacity in 2018. Other subsidiaries support the Company's core foundry business with related services such as design service and investment in start-up companies involved in design, manufacturing, and other related businesses in the semiconductor industry.

### 8.1.3 TSMC Subsidiaries

In thousands of NT(USD, EUR, JPY, KRW, RMB, CAD)\$

As of 12/31/2016

Company	Date of Incorporation	Place of Registration	Capital Stock	Business Activities
TSMC North America	Jan. 18, 1988	San Jose, California, U.S.	US\$ 11,000	Selling and marketing of integrated circuits and semiconductor devices
TSMC Europe B.V.	Mar. 04, 1994	Amsterdam, The Netherlands	EUR 100	Marketing and engineering supporting activities
TSMC Japan Limited	Sep. 10, 1997	Yokohama, Japan	JPY 300,000	Marketing activities
TSMC Korea Limited	May 02, 2006	Seoul, Korea	KRW 400,000	Customer service and technical supporting activities
TSMC China Company Limited	Aug. 04, 2003	Shanghai, China	RMB 4,502,080	Manufacturing and selling of integrated circuits at the order of and pursuant to product design specifications provided by customers
TSMC Nanjing Company Limited (Note 1)	May 16, 2016	Nanjing, China	RMB 1,366,240	Manufacturing and selling of integrated circuits at the order of and pursuant to product design specifications provided by customers
TSMC Technology, Inc.	Feb. 20, 1996	Delaware, U.S.	US\$ 0.001	Engineering support activities
InveStar Semiconductor Development Fund, Inc. (Note 2)	Sep. 10, 1996	Cayman Islands	US\$ 489	Investing in new start-up technology companies
InveStar Semiconductor Development Fund, Inc. (II) LDC. (Note 2)	Aug. 25, 2000	Cayman Islands	US\$ 5,349	Investing in new start-up technology companies
TSMC Development, Inc.	Feb. 16, 1996	Delaware, U.S.	US\$ 0.001	Investment activities
WaferTech, LLC	Jun. 03, 1996	Delaware, U.S.	US\$ 0	Manufacturing, selling, testing and computer-aided designing of integrated circuits and other semiconductor devices
TSMC Partners, Ltd.	Mar. 26, 1998	British Virgin Islands	US\$ 988,268	Investing in companies involved in the design, manufacture, and other related business in the semiconductor industry
TSMC Design Technology Canada Inc.	May 28, 2007	Ontario, Canada	CAD 2,434	Engineering support activities
TSMC Global Ltd.	Jul. 13, 2006	British Virgin Islands	US\$ 7,284,000	Investment activities
Mutual-Pak Technology Co., Ltd.	Mar. 22, 2006	New Taipei City, Taiwan	NT\$ 268,184	Manufacturing of electronic parts, wholesaling and retailing of electronic materials, and researching, developing and testing of RFID
VentureTech Alliance Fund II, L.P.	Feb. 27, 2004	Cayman Islands	US\$ 14,911	Investing in new start-up technology companies
VentureTech Alliance Fund III, L.P.	Mar. 25, 2006	Cayman Islands	US\$ 97,751	Investing in new start-up technology companies
Growth Fund Limited	May 30, 2007	Cayman Islands	US\$ 1,462	Investing in new start-up technology companies
VentureTech Alliance Holdings, LLC	Apr. 25, 2007	Delaware, U.S.	N/A	Investing in new start-up technology companies
TSMC Solar Europe GmbH (Note 3)	Dec. 17, 2010	Hamburg, Germany	EUR 400	Selling of solar modules and related products and providing customer service
VisEra Technologies Company Ltd. (Note 4)	Dec. 01, 2003	Hsinchu, Taiwan	NT\$ 2,911,531	Engaged in manufacturing electronic spare parts and in researching, developing, designing, manufacturing, selling, packaging and testing of color filter

Note 1: TSMC Nanjing Company Limited was established in May 2016.

Note 2: InveStar Semiconductor Development Fund, Inc. and InveStar Semiconductor Development Fund, Inc. (II) LDC. have started the liquidation procedures.

Note 3: The dissolution procedures of TSMC Solar Europe GmbH will be completed by the end of June 2017.

Note 4: Pursuant to TSMC Board's approval on August 2, 2016, TSMC acquired 86.94% shareholding in VisEra Technologies Company Ltd. from VisEra Holding Company, a wholly-owned subsidiary of TSMC, in August 2016. To streamline investment structure, VisEra Holding Company was merged into TSMC Partners, Ltd., the subsidiary of TSMC, in October 2016.

**8.1.4 Shareholders in Common of TSMC and Its Subsidiaries with Deemed Control and Subordination:** None.

**8.1.5 Rosters of Directors, Supervisors, and Presidents of TSMC's Subsidiaries**

Unit: NT\$(USD), except shareholding

As of 12/31/2016

Company	Title	Name	Shareholding	
			Shares (Investment Amount)	% (Investment Holding %)
TSMC North America	Director Director President	Sylvia Fang Rick Cassidy Rick Cassidy	- - -	- - -
			TSMC holds 11,000,000 shares	100%
TSMC Europe B.V.	Director Director President	Wendell Huang Maria Marced Maria Marced	- - -	- - -
			TSMC holds 200 shares	100%
TSMC Japan Limited	Director Director Supervisor President	Chih-Chun Tsai Makoto Onodera Lora Ho Makoto Onodera	- - - -	- - - -
			TSMC holds 6,000 shares	100%
TSMC Korea Limited	Director Director Director	Shing-Wha Lin Chih-Chun Tsai Wendell Huang	- - -	- - -
			TSMC holds 80,000 shares	100%
TSMC China Company Limited	Chairman Director Director Supervisor President	F.C. Tseng M.C. Tzeng L.C. Tu Lora Ho L.C. Tu	- - - - -	- - - - -
			(TSMC's investment US\$596,000,000)	(100%)
TSMC Nanjing Company Limited (Note 1)	Chairman Director Director Supervisor Supervisor President	C.C. Wei J.K.Wang Cliff Hou Lora Ho Sylvia Fang Roger Luo	- - - - - -	- - - - - -
			(TSMC's investment US\$200,000,000)	(100%)
TSMC Technology, Inc.	Chairman Director President	Lora Ho Cliff Hou Cliff Hou	- - -	- - -
			TSMC Partners, Ltd. holds 10 shares	100%
InveStar Semiconductor Development Fund, Inc. (Note 2)	Director	Wendell Huang	-	-
			TSMC Partners, Ltd. holds 582,523 shares	97.09%
InveStar Semiconductor Development Fund, Inc. (II) LDC (Note 2)	Director	Wendell Huang	-	-
			TSMC Partners, Ltd. holds 9,298,625 shares	97.09%
TSMC Development, Inc.	Chairman Director President	Lora Ho Sylvia Fang Lora Ho	- - -	- - -
			TSMC Partners, Ltd. holds 10 shares	100%
WaferTech, LLC	Director Director President	M.C. Tzeng Steve Tso Tsong-Chia Kuo	- - -	- - -
			TSMC Development, Inc. holds 293,636,833 shares	100%

(Continued)

Company	Title	Name	Shareholding	
			Shares (Investment Amount)	% (Investment Holding %)
TSMC Partners, Ltd.	Director Director President	Lora Ho Sylvia Fang Lora Ho	- - -	- - -
			TSMC holds 988,268,244 shares	100%
TSMC Design Technology Canada Inc.	Director Director Director President	Cliff Hou Cormac Michael O'Connell Sylvia Fang Cliff Hou	- - - -	- - - -
			TSMC Partners, Ltd. holds 2,300,000 shares	100%
TSMC Global Ltd.	Director Director	Lora Ho Sylvia Fang	- -	- -
			TSMC holds 7,284 shares	100%
Mutual-Pak Technology Co., Ltd.	Chairman Director Director Director Supervisor President	Hsu-Tung Chen Lewis Hwang Representative of VentureTech Alliance Fund III, L.P.: Juine-Kai Tseng Wei-Pong Lin Lewis Hwang	1,107,010 shares 2,508,000 shares 15,643,347 shares 30,000 shares 2,508,000 shares	4.13% 9.35% 58.33% 0.11% 9.35%
VentureTech Alliance Fund II, L.P.	None	None	(TSMC's investment US\$14,613,019)	(98.00%)
VentureTech Alliance Fund III, L.P.	None	None	(TSMC's investment US\$100,334,790)	(98.00%)
Growth Fund Limited	None	None	(VentureTech Alliance Fund III, L.P.'s investment US\$1,461,768)	(100%)
VentureTech Alliance Holdings, LLC	None	None	None	(100%)
TSMC Solar Europe GmbH (Note 3)	Director	C.H. Chen	-	-
			TSMC holds 800 shares	100%
VisEra Technologies Company Ltd. (Note 4)	Chairman Director Director Supervisor President	Robert Kuan J.K. Lin George Liu Wendell Huang S.C. Hsin	54,600 shares - - - -	0.02% - - - -
			TSMC holds 253,120,000 shares	86.94%

Note 1: TSMC Nanjing Company Limited was established in May 2016.

Note 2: InveStar Semiconductor Development Fund, Inc. and InveStar Semiconductor Development Fund, Inc. (II) LDC. have started the liquidation procedures.

Note 3: The dissolution procedures of TSMC Solar Europe GmbH will be completed by the end of June 2017.

Note 4: Pursuant to TSMC Board's approval on August 2, 2016, TSMC acquired 86.94% shareholding in VisEra Technologies Company Ltd. from VisEra Holding Company, a wholly-owned subsidiary of TSMC, in August 2016. To streamline investment structure, VisEra Holding Company was merged into TSMC Partners, Ltd., the subsidiary of TSMC, in October 2016.



### 8.1.6 Operational Highlights of TSMC Subsidiaries (Note)

Unit: NT\$ thousands, except EPS (\$)

As of 12/31/2016

Company	Capital Stock	Assets	Liabilities	Net Worth	Net Revenues	Income (Loss) from Operation	Net Income (Loss)	Basic Earning (Loss) Per Share
TSMC North America	354,189	94,698,404	90,358,101	4,340,303	642,518,455	226,087	195,672	17.79
TSMC Europe B.V.	3,430	492,887	139,192	353,695	518,062	55,252	40,471	202,355.00
TSMC Japan Limited	83,250	197,273	64,274	132,999	253,605	10,597	3,861	643.50
TSMC Korea Limited	10,720	38,602	2,896	35,706	24,766	2,251	2,074	25.93
TSMC China Company Limited	20,859,487	50,779,398	7,928,848	42,850,549	19,124,310	5,332,819	6,181,335	NA
TSMC Nanjing Company Limited	6,330,200	11,048,813	4,717,720	6,331,094	0	0	939	NA
TSMC Technology, Inc.	0.03	995,605	452,428	543,177	1,881,171	2,776	9,719	971,931.83
InveStar Semiconductor Development Fund, Inc.	15,744	504	0	504	0	(69)	(69)	(0.12)
InveStar Semiconductor Development Fund, Inc. (II) LDC.	172,241	208,631	7,045	201,587	0	2,925	2,925	0.31
TSMC Development, Inc.	0.03	22,404,794	0	22,404,794	1,673,727	1,673,500	1,606,936	160,693,572.14
WaferTech, LLC	0	6,749,073	630,211	6,118,862	8,360,374	1,747,334	1,483,317	5.05
TSMC Partners, Ltd.	31,821,249	51,799,183	0	51,799,183	2,151,691	2,145,629	2,145,629	2.17
TSMC Design Technology Canada Inc.	58,218	197,988	29,647	168,341	241,356	21,941	14,870	6.47
TSMC Global Ltd.	234,537,516	302,832,007	37,197,279	265,634,729	3,501,359	2,819,606	2,818,659	497,904.06
Mutual-Pak Technology Co.,Ltd	268,184	94,335	81,732	12,603	123,113	3,249	2,526	0.09
VentureTech Alliance Fund II, L.P.	480,127	470,332	0	470,332	9,475	(87,045)	(87,451)	NA
VentureTech Alliance Fund III, L.P.	3,147,480	200,447	0	200,447	163,385	(13,072)	(13,072)	NA
Growth Fund Limited	47,067	29,486	0	29,486	5,696	3,901	3,901	NA
VentureTech Alliance Holdings, LLC	0	0	0	0	0	0	0	NA
TSMC Solar Europe GmbH	13,720	33,645	39,973	(6,328)	6,860	(7,680)	(7,810)	(9,762.96)
VisEra Technologies Company Ltd.	2,911,531	6,966,045	1,006,476	5,959,569	3,444,979	772,952	661,562	2.27

Note: Foreign exchange rates for balance sheet amounts are as follows:

\$1 USD = \$32.199 NT, \$1 EUR = \$34.30 NT, \$1 JPY = \$0.2775 NT, \$1 RMB = \$4.63 NT, \$1 KRW = \$0.0268 NT, \$1 CAD = \$23.92 NT

Foreign exchange rates for income statement amounts are as follows:

\$1 USD = \$32.274 NT, \$1 EUR = \$35.92 NT, \$1 JPY = \$0.2987 NT, \$1 RMB = \$4.86 NT, \$1 KRW = \$0.0280 NT, \$1 CAD = \$24.44 NT

**8.2 Status of TSMC Common Shares and ADRs Acquired, Disposed of, and Held by Subsidiaries:** None.

### 8.3 Special Notes

**8.3.1 Private Placement Securities in 2016 and as of the Date of this Annual Report:** None.

**8.3.2 Regulatory Authorities' Legal Penalties to the Company or Its Employees, and the Company's Resulting Punishment on Its Employees for Violations of Internal Control System Provisions, Principal Deficiencies, and the State of Any Efforts to Make Improvements in 2016 and as of the Date of this Annual Report**

In 2016 and as of the Date of this Annual Report, the Company complied with the Taiwan Company Law, Securities Trading Act and relevant labor laws and regulations. The competent authorities levied fines totaling NT\$166,000 for three violations of environmental and safety laws: (1) After the magnitude 6.4 earthquake which struck southern Taiwan on February 6, 2016, one of our employees was injured during the assessment of the damage caused. The Company has further strengthened relevant safety measures, and revised the internal rule to enhance environmental checks conducted after earthquakes; (2) Our vendors did not take effective measures to suppress dust at our construction site. The vendors have taken corrective action measures and increased relevant supervisory and execution professionals per our request. We also increased our own supervision over this site; (3) The Company did not appropriately report the non-production of a specific type of non-hazardous waste. We submitted our report immediately upon notification from the competent authority and enhanced the inspection process for future reporting.

**8.3.3 Any Events in 2016 and as of the Date of this Annual Report that Had Significant Impacts on Shareholders' Right or Security Prices as Stated in Item 3 Paragraph 2 of Article 36 of Securities and Exchange Law of Taiwan:** None.

**8.3.4 Other Necessary Supplement:** None.

# Contact Information

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## Corporate Headquarters & Fab 12A

8, Li-Hsin Rd. 6, Hsinchu Science Park, Hsinchu 30078, Taiwan, R.O.C.  
Tel: +886-3-5636688 Fax: +886-3-5637000

## R&D Center & Fab 12B

168, Park Ave. II, Hsinchu Science Park, Hsinchu 30075, Taiwan, R.O.C.  
Tel: +886-3-5636688 Fax: +886-3-6687827

## Fab 2, Fab 5

121, Park Ave. 3, Hsinchu Science Park, Hsinchu 30077, Taiwan, R.O.C.  
Tel: +886-3-5636688 Fax: +886-3-5781546

## Fab 3

9, Creation Rd. 1, Hsinchu Science Park, Hsinchu 30077, Taiwan, R.O.C.  
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## Fab 6

1, Nan-Ke North Rd., Tainan Science Park, Tainan 74144, Taiwan,  
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Tel: +886-6-5056688 Fax: +886-6-5052057

## Fab 8

25, Li-Hsin Rd., Hsinchu Science Park, Hsinchu 30078, Taiwan, R.O.C.  
Tel: +886-3-5636688 Fax: +886-3-5662051

## Fab 14A

1-1, Nan-Ke North Rd., Tainan Science Park, Tainan 74144, Taiwan  
R.O.C.  
Tel: +886-6-5056688 Fax: +886-6-5051262

## Fab 14B

17, Nan-Ke 9th Rd., Tainan Science Park, Tainan 74144, Taiwan, R.O.C.  
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## Fab 15A

1, Keya Rd. 6, Central Taiwan Science Park, Taichung 42882, Taiwan  
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Tel: +886-4-27026688 Fax: +886-4-25607548

## Fab 15B

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Tel: +886-4-27026688 Fax: +886-4-24630372

## TSMC North America

2851 Junction Avenue, San Jose, CA 95134, U.S.A.  
Tel: +1-408-3828000 Fax: +1-408-3828008

## TSMC Europe B.V.

World Trade Center, Zuidplein 60, 1077 XV Amsterdam  
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Tel: +31-20-3059900 Fax: +31-20-3059911

## TSMC Japan Limited

21F, Queen's Tower C, 2-3-5, Minatomirai, Nishi-ku, Yokohama  
Kanagawa, 220-6221, Japan  
Tel: +81-45-6820470 Fax: +81-45-6820673

## TSMC China Company Limited

4000, Wen Xiang Road, Songjiang, Shanghai, China  
Postcode: 201616  
Tel: +86-21-57768000 Fax: +86-21-57762525

## TSMC Nanjing Company Limited

16, Zifeng Road, Pukou Economic Development Zone, Nanjing  
Jiangsu Province, China  
Postcode: 211806  
Tel: +86-25-57668000 Fax: +86-25-57712395

## TSMC Korea Limited

15F, AnnJay Tower, 208, Teheran-ro, Gangnam-gu, Seoul 06220, Korea  
Tel: +82-2-20511688 Fax: +82-2-20511669

## TSMC Design Technology Canada Inc.

535 Legget Dr., Suite 600, Kanata, ON K2K 3B8, Canada  
Tel: +613-576-1990 Fax: +613-576-1999

## TSMC Spokesperson

Name: Lora Ho  
Title: Senior Vice President & CFO  
Tel: +886-3-5054602 Fax: +886-3-5637000  
Email: cyhsu@tsmc.com

## TSMC Deputy Spokesperson/Corporate Communications

Name: Elizabeth Sun  
Title: Senior Director, TSMC Corporate Communication Division  
Tel: +886-3-5682085 Fax: +886-3-5637000  
Email: elizabeth\_sun@tsmc.com

## Auditors

Company: Deloitte & Touche  
Auditors: Yih-Hsin Kao, Yu-Feng Huang  
Address: 12F, 156, Sec. 3, Min-Sheng E. Rd., Taipei 10596, Taiwan  
R.O.C.  
Tel: +886-2-25459988 Fax: +886-2-25459966  
Website: <http://www.deloitte.com.tw>

## Common Share Transfer Agent and Registrar

Company: The Transfer Agency Department of CTBC Bank  
Address: 5F, 83, Sec. 1, Chung-Ching S. Rd., Taipei 10008, Taiwan  
R.O.C.  
Tel: +886-2-66365566 Fax: +886-2-23116723  
Website: <http://www.ctbcbank.com>

## ADR Depository Bank

Company: Citibank, N.A.  
Depository Receipts Services  
Address: 388 Greenwich Street, New York, NY 10013, U.S.A.  
Website: <http://www.citi.com/dr>  
Tel: +1-877-2484237 (toll free)  
Tel: +1-781-5754555 (out of US)  
Fax: +1-201-3243284  
E-mail: [citibank@shareholders-online.com](mailto:citibank@shareholders-online.com)

TSMC's depository receipts of the common shares are listed on New York Stock Exchange (NYSE) under the symbol TSM. The information relating to TSM is available at <http://www.nyse.com> and <http://mops.twse.com.tw>

# Contents

<b>Consolidated Financial Statements for the Years Ended December 31, 2016 and 2015 and Independent Auditors' Report</b>	<b>1</b>
<b>Parent Company Only Financial Statements for the Years Ended December 31, 2016 and 2015 and Independent Auditors' Report</b>	<b>101</b>



**Taiwan Semiconductor Manufacturing  
Company Limited and Subsidiaries**

**Consolidated Financial Statements for the  
Years Ended December 31, 2016 and 2015 and  
Independent Auditors' Report**



## **REPRESENTATION LETTER**

The entities that are required to be included in the combined financial statements of Taiwan Semiconductor Manufacturing Company Limited as of and for the year ended December 31, 2016, under the Criteria Governing the Preparation of Affiliation Reports, Consolidated Business Reports and Consolidated Financial Statements of Affiliated Enterprises are the same as those included in the consolidated financial statements prepared in conformity with the International Financial Reporting Standard 10, "Consolidated Financial Statements." In addition, the information required to be disclosed in the combined financial statements is included in the consolidated financial statements. Consequently, Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries do not prepare a separate set of combined financial statements.

Very truly yours,

**TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LIMITED**

By

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**MORRIS CHANG**  
Chairman

February 14, 2017



## INDEPENDENT AUDITORS' REPORT

The Board of Directors and Shareholders  
Taiwan Semiconductor Manufacturing Company Limited

### Opinion

We have audited the accompanying consolidated financial statements of Taiwan Semiconductor Manufacturing Company Limited and subsidiaries (the "Company"), which comprise the consolidated balance sheets as of December 31, 2016 and 2015, and the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and the notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2016 and 2015, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China.

### Basis for Opinion

We conducted our audits in accordance with the Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants and auditing standards generally accepted in the Republic of China. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Company in accordance with The Norm of Professional Ethics for Certified Public Accountant of the Republic of China and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the year ended December 31, 2016. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters for the Company's consolidated financial statements for the year ended December 31, 2016 are stated as follows:

#### Provision of sales returns and allowances

In consideration of business volume and market conditions, the Company provides a variety of business incentives to specific customers or products. The provision of sales returns and allowance is based on historical experience and the varying contractual terms by management's judgment. Please refer to Notes 4, 5 and 19 to the consolidated financial statements for the details of the information about provision of sales returns and allowances. Since the provision of sales returns and allowances is subject to management's judgment,

which has significant uncertainty, and the result could also affect the net revenue in the consolidated financial statements, it has been identified as a key audit matter.

Our key audit procedures performed in respect of the above area included the following:

1. Understood and tested the design and operating effectiveness of the key controls over provision of sales returns and allowances;
2. Understood and assessed the reasonableness of management's assumptions made and methodology used in estimating provision of sales returns and allowances;
3. Sampled and inspected the Company's sales contracts of main products by agreeing the contractual terms and performed an analysis to challenge management's estimation on possibility that specific products could meet business incentives condition to verify the reasonableness of the accrual of the provision;
4. Performed a retrospective review to comparatively analyze the historical accuracy of judgments with reference to actual sales allowance paid.

Timing to commence depreciation of property, plant and equipment (PP&E)

The Company continues to invest in capital expenditures to develop and build capacity in leading-edge technologies to meet customers' demand. Please refer to Notes 4 and 15 to the consolidated financial statements for the details of the information and accounting policy about the depreciation of PP&E. According to IAS 16, depreciation of PP&E should commence when the assets are available for their intended use. Due to the significant capital expenditures incurred by the Company, the appropriateness of the timing to commence depreciation of PP&E could have a material impact on its financial performance. Consequently, the validity of the timing to commence depreciation of PP&E is identified as a key audit matter.

Our key audit procedures performed in respect of the above area included the following:

1. Understood and tested the design and operating effectiveness of the key controls over the timing to commence depreciation of PP&E;
2. Understood the criteria the assets are defined as available for use intended by management and the corresponding accounting treatments;
3. Sampled and reviewed the appropriateness of the timing for commencing depreciation after the assets met the criteria of available for use in current year;
4. Performed an observation on the physical count of equipment under installation and construction in progress; sampled and inspected the supporting documentation to verify that the status of equipment under installation and construction in progress are not available for use;
5. Sampled equipment under installation and construction in progress which met the criteria of available for use and were transferred in the subsequent period to evaluate the reasonableness of the timing for commencing depreciation;
6. Sampled and reviewed the appropriateness of the equipment under installation and construction in progress which are not available for their intended use.



## **Other Matter**

We have also audited the parent company only financial statements of Taiwan Semiconductor Manufacturing Company Limited as of and for the years ended December 31, 2016 and 2015 on which we have issued an unmodified opinion.

## **Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements**

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the IFRS, IAS, IFRIC, and SIC endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance (including members of the Audit Committee) are responsible for overseeing the Company's financial reporting process.

## **Auditors' Responsibilities for the Audit of the Consolidated Financial Statements**

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the auditing standards generally accepted in the Republic of China will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with the auditing standards generally accepted in the Republic of China, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

1. Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
2. Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
3. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
4. Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our



conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Company to cease to continue as a going concern.

5. Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
6. Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements for the year ended December 31, 2016 and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partners on the audit resulting in this independent auditors' report are Yih-Shin Kao and Yu Feng Huang.

Deloitte & Touche  
Taipei, Taiwan  
The Republic of China



February 14, 2017

Notice to Readers

*The accompanying consolidated financial statements are intended only to present the consolidated financial position, financial performance and cash flows in accordance with accounting principles and practices generally accepted in the Republic of China and not those of any other jurisdictions. The standards, procedures and practices to audit such consolidated financial statements are those generally applied in the Republic of China.*

*For the convenience of readers, the independent auditors' report and the accompanying consolidated financial statements have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditors' report and consolidated financial statements shall prevail.*

# Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

## CONSOLIDATED BALANCE SHEETS (In Thousands of New Taiwan Dollars)

ASSETS	December 31, 2016		December 31, 2015	
	Amount	%	Amount	%
<b>CURRENT ASSETS</b>				
Cash and cash equivalents (Note 6)	\$ 541,253,833	29	\$ 562,688,930	34
Financial assets at fair value through profit or loss (Note 7)	6,451,112	-	6,026	-
Available-for-sale financial assets (Notes 8 and 14)	67,788,767	4	14,299,361	1
Held-to-maturity financial assets (Note 9)	16,610,116	1	9,166,523	1
Hedging derivative financial assets (Note 10)	5,550	-	1,739	-
Notes and accounts receivable, net (Note 11)	128,335,271	7	85,059,675	5
Receivables from related parties (Note 37)	969,559	-	505,722	-
Other receivables from related parties (Note 37)	146,788	-	125,018	-
Inventories (Notes 5, 12 and 41)	48,682,233	3	67,052,270	4
Other financial assets (Notes 38 and 41)	4,100,475	-	4,305,358	-
Other current assets (Note 17)	3,385,422	-	3,533,369	-
Total current assets	817,729,126	44	746,743,991	45
<b>NONCURRENT ASSETS</b>				
Held-to-maturity financial assets (Note 9)	22,307,561	1	6,910,873	-
Financial assets carried at cost (Note 13)	4,102,467	-	3,990,882	-
Investments accounted for using equity method (Notes 5 and 14)	19,743,888	1	24,091,828	2
Property, plant and equipment (Notes 5 and 15)	997,777,687	53	853,470,392	52
Intangible assets (Notes 5, 16 and 33)	14,614,846	1	14,065,880	1
Deferred income tax assets (Notes 5 and 30)	8,271,421	-	6,384,974	-
Refundable deposits	407,874	-	430,802	-
Other noncurrent assets (Note 17)	1,500,432	-	1,428,676	-
Total noncurrent assets	1,068,726,176	56	910,774,307	55
<b>TOTAL</b>	<b>\$ 1,886,455,302</b>	<b>100</b>	<b>\$ 1,657,518,298</b>	<b>100</b>
<b>LIABILITIES AND EQUITY</b>				
<b>CURRENT LIABILITIES</b>				
Short-term loans (Note 18)	\$ 57,958,200	3	\$ 39,474,000	2
Financial liabilities at fair value through profit or loss (Note 7)	191,135	-	72,610	-
Accounts payable	26,062,351	2	18,575,286	1
Payables to related parties (Note 37)	1,262,174	-	1,149,988	-
Salary and bonus payable	13,681,817	1	11,702,042	1
Accrued profit sharing bonus to employees and compensation to directors and supervisors (Notes 23 and 32)	22,894,006	1	20,958,893	1
Payables to contractors and equipment suppliers	63,154,514	3	26,012,192	2
Income tax payable (Notes 5 and 30)	40,306,054	2	32,901,106	2
Provisions (Notes 5 and 19)	18,037,789	1	10,163,536	1
Long-term liabilities - current portion (Note 20)	38,109,680	2	23,517,612	1
Accrued expenses and other current liabilities (Note 22)	36,581,553	2	27,701,329	2
Total current liabilities	318,239,273	17	212,228,594	13
<b>NONCURRENT LIABILITIES</b>				
Bonds payable (Note 20)	153,093,557	8	191,965,082	12
Long-term bank loans	21,780	-	32,500	-
Deferred income tax liabilities (Notes 5 and 30)	141,183	-	31,271	-
Net defined benefit liability (Notes 5 and 21)	8,551,408	-	7,448,026	-
Guarantee deposits (Note 22)	14,670,433	1	21,564,801	1
Others (Note 19)	1,686,542	-	1,613,545	-
Total noncurrent liabilities	178,164,903	9	222,655,225	13
Total liabilities	496,404,176	26	434,883,819	26
<b>EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT</b>				
Capital stock (Note 23)	259,303,805	14	259,303,805	16
Capital surplus (Note 23)	56,272,304	3	56,300,215	3
Retained earnings (Note 23)				
Appropriated as legal capital reserve	208,297,945	11	177,640,561	11
Unappropriated earnings	863,710,224	46	716,653,025	43
	1,072,008,169	57	894,293,586	54
Others (Note 23)	1,663,983	-	11,774,113	1
Equity attributable to shareholders of the parent	1,389,248,261	74	1,221,671,719	74
<b>NONCONTROLLING INTERESTS</b>				
Total equity	802,865	-	962,760	-
<b>TOTAL</b>	<b>\$ 1,886,455,302</b>	<b>100</b>	<b>\$ 1,657,518,298</b>	<b>100</b>

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

## Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

### CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2016		2015	
	Amount	%	Amount	%
NET REVENUE (Notes 5, 25, 37 and 43)	\$ 947,938,344	100	\$ 843,497,368	100
COST OF REVENUE (Notes 5, 12, 32, 37 and 41)	<u>473,077,173</u>	<u>50</u>	<u>433,117,601</u>	<u>51</u>
GROSS PROFIT BEFORE REALIZED (UNREALIZED) GROSS PROFIT ON SALES TO ASSOCIATES	474,861,171	50	410,379,767	49
REALIZED (UNREALIZED) GROSS PROFIT ON SALES TO ASSOCIATES	<u>(29,073)</u>	<u>-</u>	<u>15,126</u>	<u>-</u>
GROSS PROFIT	<u>474,832,098</u>	<u>50</u>	<u>410,394,893</u>	<u>49</u>
OPERATING EXPENSES (Notes 5, 32 and 37)				
Research and development	71,207,703	7	65,544,579	8
General and administrative	19,795,593	2	17,257,237	2
Marketing	<u>5,900,837</u>	<u>1</u>	<u>5,664,684</u>	<u>1</u>
Total operating expenses	<u>96,904,133</u>	<u>10</u>	<u>88,466,500</u>	<u>11</u>
OTHER OPERATING INCOME AND EXPENSES, NET (Notes 15, 16, 26 and 32)	<u>29,813</u>	<u>-</u>	<u>(1,880,618)</u>	<u>-</u>
INCOME FROM OPERATIONS (Note 43)	<u>377,957,778</u>	<u>40</u>	<u>320,047,775</u>	<u>38</u>
NON-OPERATING INCOME AND EXPENSES				
Share of profits of associates and joint venture (Notes 14 and 43)	3,495,600	-	4,132,128	-
Other income (Note 27)	6,454,901	1	4,750,829	1
Foreign exchange gain, net (Note 42)	1,161,322	-	2,481,446	-
Finance costs (Note 28)	(3,306,153)	-	(3,190,331)	-
Other gains and losses (Note 29)	<u>195,932</u>	<u>-</u>	<u>22,207,064</u>	<u>3</u>
Total non-operating income and expenses	<u>8,001,602</u>	<u>1</u>	<u>30,381,136</u>	<u>4</u>
INCOME BEFORE INCOME TAX	385,959,380	41	350,428,911	42
INCOME TAX EXPENSE (Notes 5, 30 and 43)	<u>51,621,144</u>	<u>6</u>	<u>43,872,744</u>	<u>6</u>
NET INCOME	<u>334,338,236</u>	<u>35</u>	<u>306,556,167</u>	<u>36</u>
OTHER COMPREHENSIVE INCOME (LOSS) (Notes 14, 21, 23 and 30)				
Items that will not be reclassified subsequently to profit or loss:				
Remeasurement of defined benefit obligation	(1,057,220)	-	(827,703)	-
Share of other comprehensive loss of associates and joint venture	(19,961)	-	(2,546)	-
Income tax benefit related to items that will not be reclassified subsequently	<u>126,867</u>	<u>-</u>	<u>99,326</u>	<u>-</u>
	<u>(950,314)</u>	<u>-</u>	<u>(730,923)</u>	<u>-</u>

(Continued)



## Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

### CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2016		2015	
	Amount	%	Amount	%
Items that may be reclassified subsequently to profit or loss:				
Exchange differences arising on translation of foreign operations	\$ (9,379,477)	(1)	\$ 6,604,768	1
Changes in fair value of available-for-sale financial assets	(692,523)	-	(20,489,015)	(2)
Share of other comprehensive income (loss) of associates and joint venture	16,301	-	(83,021)	-
Income tax expense related to items that may be reclassified subsequently	<u>(61,176)</u>	<u>-</u>	<u>(15,991)</u>	<u>-</u>
	<u>(10,116,875)</u>	<u>(1)</u>	<u>(13,983,259)</u>	<u>(1)</u>
Other comprehensive loss for the year, net of income tax	<u>(11,067,189)</u>	<u>(1)</u>	<u>(14,714,182)</u>	<u>(1)</u>
<b>TOTAL COMPREHENSIVE INCOME FOR THE YEAR</b>	<u><b>\$ 323,271,047</b></u>	<u><b>34</b></u>	<u><b>\$ 291,841,985</b></u>	<u><b>35</b></u>
<b>NET INCOME (LOSS) ATTRIBUTABLE TO:</b>				
Shareholders of the parent	\$ 334,247,180	35	\$ 306,573,837	36
Noncontrolling interests	<u>91,056</u>	<u>-</u>	<u>(17,670)</u>	<u>-</u>
	<u><b>\$ 334,338,236</b></u>	<u><b>35</b></u>	<u><b>\$ 306,556,167</b></u>	<u><b>36</b></u>
<b>TOTAL COMPREHENSIVE INCOME (LOSS) ATTRIBUTABLE TO:</b>				
Shareholders of the parent	\$ 323,186,736	34	\$ 291,867,757	35
Noncontrolling interests	<u>84,311</u>	<u>-</u>	<u>(25,772)</u>	<u>-</u>
	<u><b>\$ 323,271,047</b></u>	<u><b>34</b></u>	<u><b>\$ 291,841,985</b></u>	<u><b>35</b></u>
	<b>2016</b>		<b>2015</b>	
	<b>Income Attributable to Shareholders of the Parent</b>		<b>Income Attributable to Shareholders of the Parent</b>	
<b>EARNINGS PER SHARE (NT\$, Note 31)</b>				
Basic earnings per share	<u>\$ 12.89</u>		<u>\$ 11.82</u>	
Diluted earnings per share	<u>\$ 12.89</u>		<u>\$ 11.82</u>	

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

(Concluded)

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY  
(In Thousands of New Taiwan Dollars, Except Dividends Per Share)

	Equity Attributable to Shareholders of the Parent										Others		Total Equity
	Capital Stock - Common Stock		Capital Surplus	Legal Capital Reserve	Retained Earnings		Foreign Currency Translation Reserve	Unrealized Gain/Loss from Available-for-sale Financial Assets	Cash Flow Hedges Reserve	Total	Noncontrolling Interests	Total	
	Shares (In Thousands)	Amount			Unappropriated Earnings	Unappropriated Earnings							
BALANCE, JANUARY 1, 2015	25,929,662	\$ 259,296,624	\$ 55,989,922	\$ 151,250,682	\$ 555,914,592	\$ 705,165,274	\$ 4,502,113	\$ 21,247,483	\$ (305)	\$ 25,749,291	\$ 1,046,201,111	\$ 127,221	\$ 1,046,328,332
Appropriations of prior year's earnings	-	-	-	26,389,879	(26,389,879)	-	-	-	-	-	-	-	-
Cash dividends to shareholders - NT\$4.5 per share	-	-	-	(116,683,481)	(116,683,481)	(116,683,481)	-	-	-	-	(116,683,481)	-	(116,683,481)
Total	-	-	-	26,389,879	(143,073,360)	(116,683,481)	-	-	-	-	(116,683,481)	-	(116,683,481)
Net income (loss) in 2015	-	-	-	-	306,573,837	306,573,837	-	-	-	-	306,573,837	(17,670)	306,556,167
Other comprehensive income (loss) in 2015, net of income tax	-	-	-	-	(730,902)	(730,902)	6,537,836	(20,512,712)	(302)	(13,975,178)	(14,706,080)	(8,102)	(14,714,182)
Total comprehensive income (loss) in 2015	-	-	-	-	305,842,935	305,842,935	6,537,836	(20,512,712)	(302)	(13,975,178)	291,867,757	(25,772)	291,841,985
Issuance of stock from exercise of employee stock options	718	7,181	130,974	-	-	-	-	-	-	-	138,155	-	138,155
Disposal of investments accounted for using equity method	-	-	(47,850)	-	-	-	-	-	-	-	(47,850)	-	(47,850)
Adjustments to share of changes in equities of associates and joint venture	-	-	230,743	-	-	-	-	-	-	-	230,743	(4,230)	226,513
From differences between equity purchase price and carrying amount arising from actual acquisition or disposal of subsidiaries	-	-	-	-	(31,142)	(31,142)	-	-	-	-	(31,142)	31,142	-
From share of changes in equities of subsidiaries	-	-	(3,574)	-	-	-	-	-	-	-	(3,574)	3,574	-
Decrease in noncontrolling interests	-	-	-	-	-	-	-	-	-	-	-	(50,218)	(50,218)
Effect of acquisition of subsidiary	-	-	-	-	-	-	-	-	-	-	-	-	-
Effect of disposal of subsidiary	-	-	-	-	-	-	-	-	-	-	-	923,683	923,683
BALANCE, DECEMBER 31, 2015	25,930,380	259,303,805	56,300,215	177,640,561	716,653,025	894,293,586	11,039,949	734,771	(607)	11,774,113	1,221,671,719	962,760	1,222,634,479
Appropriations of prior year's earnings	-	-	-	30,657,384	(30,657,384)	-	-	-	-	-	-	-	-
Legal capital reserve	-	-	-	30,657,384	(155,582,283)	(155,582,283)	-	-	-	-	(155,582,283)	-	(155,582,283)
Cash dividends to shareholders - NT\$6.0 per share	-	-	-	(186,239,667)	(186,239,667)	(186,239,667)	-	-	-	-	(186,239,667)	-	(186,239,667)
Total	-	-	-	30,657,384	(306,573,837)	(306,573,837)	-	-	-	-	(306,573,837)	-	(306,573,837)
Net income in 2016	-	-	-	-	334,247,180	334,247,180	-	-	-	-	334,247,180	91,056	334,338,236
Other comprehensive income (loss) in 2016, net of income tax	-	-	-	-	(950,314)	(950,314)	(9,378,712)	(732,130)	712	(10,110,130)	(11,060,444)	(6,745)	(11,067,189)
Total comprehensive income (loss) in 2016	-	-	-	-	333,296,866	333,296,866	(9,378,712)	(732,130)	712	(10,110,130)	323,186,736	84,311	323,271,047
Disposal of investments accounted for using equity method	-	-	(56,169)	-	-	-	-	-	-	-	(56,169)	-	(56,169)
Adjustments to share of changes in equities of associates and joint venture	-	-	21,221	-	-	-	-	-	-	-	21,221	9	21,230
From share of changes in equities of subsidiaries	-	-	7,037	-	-	-	-	-	-	-	7,037	(7,037)	-
Decrease in noncontrolling interests	-	-	-	-	-	-	-	-	-	-	-	(235,224)	(235,224)
Effect of disposal of subsidiary	-	-	-	-	-	-	-	-	-	-	-	(1,954)	(1,954)
BALANCE, DECEMBER 31, 2016	25,930,380	259,303,805	\$ 56,272,304	\$ 208,297,945	\$ 865,710,224	\$ 1,072,008,169	\$ 1,661,237	\$ 2,644	\$ 105	\$ 1,663,983	\$ 1,389,248,261	\$ 802,865	\$ 1,390,051,126

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

# Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

## CONSOLIDATED STATEMENTS OF CASH FLOWS (In Thousands of New Taiwan Dollars)

	2016	2015
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Income before income tax	\$ 385,959,380	\$ 350,428,911
Adjustments for:		
Depreciation expense	220,084,998	219,303,369
Amortization expense	3,743,406	3,202,200
Finance costs	3,306,153	3,190,331
Share of profits of associates and joint venture	(3,495,600)	(4,132,128)
Interest income	(6,317,500)	(4,129,316)
Gain on disposal of property, plant and equipment, net	(46,548)	(433,559)
Impairment loss on property, plant and equipment	-	2,545,584
Impairment loss on intangible assets	-	58,514
Impairment loss on financial assets	122,240	154,721
Loss (gain) on disposal of available-for-sale financial assets, net	4,014	(22,070,736)
Gain on disposal of financial assets carried at cost, net	(37,241)	(87,193)
Loss (gain) on disposal of investments accounted for using equity method, net	259,960	(2,507,707)
Loss from liquidation of subsidiaries	36,105	138,243
Unrealized (realized) gross profit on sales to associates	29,073	(15,126)
Loss (gain) on foreign exchange, net	(2,656,406)	2,563,439
Dividend income	(137,401)	(621,513)
Loss (gain) from hedging instruments	(12,725)	134,112
Loss (gain) arising from changes in fair value of available-for-sale financial assets in hedge effective portion	(4,248)	305,619
Gain from lease agreement modification	-	(430,041)
Changes in operating assets and liabilities:		
Financial instruments at fair value through profit or loss	(6,326,561)	(228,560)
Notes and accounts receivable, net	(49,342,698)	26,630,123
Receivables from related parties	(463,837)	(192,767)
Other receivables from related parties	(21,770)	53,607
Inventories	18,370,037	(655,249)
Other financial assets	(41,554)	720,301
Other current assets	94,512	263,384
Other noncurrent assets	(349,771)	-
Accounts payable	7,295,491	(2,693,358)
Payables to related parties	139,818	(369,134)
Salary and bonus payable	1,979,775	945,030
Accrued profit sharing bonus to employees and compensation to directors and supervisors	1,935,113	2,860,250
Accrued expenses and other current liabilities	3,693,638	(3,778,322)
Provisions	7,931,877	(382,774)
Net defined benefit liability	46,163	52,540
Cash generated from operations	<u>585,777,893</u>	<u>570,822,795</u>
Income taxes paid	<u>(45,943,301)</u>	<u>(40,943,357)</u>
Net cash generated by operating activities	<u>539,834,592</u>	<u>529,879,438</u>

(Continued)



# Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

## CONSOLIDATED STATEMENTS OF CASH FLOWS (In Thousands of New Taiwan Dollars)

	2016	2015
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Acquisitions of:		
Available-for-sale financial assets	\$ (83,275,573)	\$ (13,392,330)
Held-to-maturity financial assets	(33,625,353)	(28,181,915)
Financial assets carried at cost	(533,745)	(2,586,169)
Property, plant and equipment	(328,045,270)	(257,516,835)
Intangible assets	(4,243,087)	(4,283,870)
Land use right	(805,318)	-
Proceeds from disposal or redemption of:		
Available-for-sale financial assets	29,967,979	57,493,051
Held-to-maturity financial assets	10,550,000	16,800,000
Financial assets carried at cost	160,498	368,778
Investments accounted for using equity method	-	5,171,962
Property, plant and equipment	98,069	816,852
Proceeds from return of capital of financial assets carried at cost	65,087	-
Derecognition of hedging derivative financial instruments	8,868	2,659
Costs from entering into hedging transactions	-	(495,348)
Interest received	6,353,195	3,641,920
Proceeds from government grants - land use right and others	798,469	-
Proceeds from government grants - property, plant and equipment	738,643	-
Net cash outflow from acquisition of subsidiary (Note 33)	-	(51,601)
Net cash inflow from disposal of subsidiary (Note 34)	-	601,047
Other dividends received	137,420	616,675
Dividends received from investments accounted for using equity method	5,478,790	3,407,126
Refundable deposits paid	(144,982)	(404,458)
Refundable deposits refunded	169,912	348,434
Decrease in receivables for temporary payments	706,718	398,185
	<u>(395,439,680)</u>	<u>(217,245,837)</u>
Net cash used in investing activities		
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Increase in short-term loans	18,968,936	3,138,680
Repayment of bonds	(23,471,600)	-
Repayment of long-term bank loans	(8,540)	-
Interest paid	(3,302,420)	(3,156,218)
Decrease in obligations under finance leases	-	(29,098)
Guarantee deposits received	6,354,677	754,873
Guarantee deposits refunded	(523,234)	(742,458)
Cash dividends	(155,582,283)	(116,683,481)
Proceeds from exercise of employee stock options	-	33,891
Decrease in noncontrolling interests	(235,733)	(50,218)
	<u>(157,800,197)</u>	<u>(116,734,029)</u>
Net cash used in financing activities		

(Continued)

# Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

## CONSOLIDATED STATEMENTS OF CASH FLOWS (In Thousands of New Taiwan Dollars)

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	2016	2015
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	\$ (8,029,812)	\$ 8,258,851
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(21,435,097)	204,158,423
CASH AND CASH EQUIVALENTS INCLUDED IN NONCURRENT ASSETS HELD FOR SALE, BEGINNING OF YEAR	-	81,478
CASH AND CASH EQUIVALENT ON CONSOLIDATED BALANCE SHEET, BEGINNING OF YEAR	<u>562,688,930</u>	<u>358,449,029</u>
CASH AND CASH EQUIVALENTS, END OF YEAR	<u>\$ 541,253,833</u>	<u>\$ 562,688,930</u>

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

(Concluded)

# Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

### FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015

(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

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#### 1. GENERAL

Taiwan Semiconductor Manufacturing Company Limited (TSMC), a Republic of China (R.O.C.) corporation, was incorporated on February 21, 1987. TSMC is a dedicated foundry in the semiconductor industry which engages mainly in the manufacturing, selling, packaging, testing and computer-aided design of integrated circuits and other semiconductor devices and the manufacturing of masks.

On September 5, 1994, TSMC's shares were listed on the Taiwan Stock Exchange (TWSE). On October 8, 1997, TSMC listed some of its shares of stock on the New York Stock Exchange (NYSE) in the form of American Depositary Shares (ADSs).

The address of its registered office and principal place of business is No. 8, Li-Hsin Rd. 6, Hsinchu Science Park, Taiwan. The principal operating activities of TSMC's subsidiaries are described in Note 4.

#### 2. THE AUTHORIZATION OF FINANCIAL STATEMENTS

The accompanying consolidated financial statements were approved and authorized for issue by the Board of Directors on February 14, 2017.

#### 3. APPLICATION OF NEW AND REVISED INTERNATIONAL FINANCIAL REPORTING STANDARDS

As of the date that the accompanying consolidated financial statements were authorized for issue, TSMC and its subsidiaries (collectively as the "Company") have not applied the following amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) issued by the International Accounting Standards Board (IASB) (collectively, "IFRSs").

##### a. Amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers

Rule No. 1050050021 issued by Financial Supervisory Commission (FSC) stipulated that starting January 1, 2017, the Company should apply the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers.

The amendments include additions of several accounting items and requirements for disclosures of impairment of non-financial assets as a consequence of the IFRSs endorsed by the FSC for application starting from 2017. In addition, as a result of the post implementation review of IFRSs in Taiwan, the amendments also include emphasis on certain recognition and measurement considerations and add requirements for disclosures of related party transactions and goodwill.

The amendments stipulate that other companies or institutions of which the chairman of the board of directors or president serves as the chairman of the board of directors or the president, or is the spouse or second immediate family of the chairman of the board of directors or president of the Company are deemed to have a substantive related party relationship, unless it can be demonstrated that no control, joint control, or significant influence exists. Furthermore, the amendments require the disclosure of the names of the related parties and the relationship with whom the Company has significant transaction.



If the transaction or balance with a specific related party is 10% or more of the Company's respective total transaction or balance, such transaction should be separately disclosed by the name of each related party.

The amendments also require additional disclosure if there is a significant difference between the actual operation after business combination and the expected benefits on acquisition date.

The disclosures of related party transactions and impairment of goodwill will be enhanced when the above amendments are retrospectively applied in 2017.

Except for the aforementioned impact, as of the date that the accompanying consolidated financial statements were authorized for issue, the Company continues in evaluating the impact on its financial position and financial performance as a result of amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers. The related impact will be disclosed when the Company completes the evaluation.

b. The IFRSs in issue and endorsed by FSC with effective date starting 2017

According to Rule No. 1050026834 issued by the FSC, the following IFRSs issued by the IASB and endorsed by the FSC should be adopted by the Company starting 2017.

<b>New, Revised or Amended Standards and Interpretations</b>	<b>Effective Date Issued by IASB (Note 1)</b>
Annual Improvements to IFRSs 2010 - 2012 Cycle	July 1, 2014 or transactions on or after July 1, 2014
Annual Improvements to IFRSs 2011 - 2013 Cycle	July 1, 2014
Annual Improvements to IFRSs 2012 - 2014 Cycle	January 1, 2016 (Note 2)
Amendments to IFRS 10, IFRS 12 and IAS 28 "Investment Entities: Applying the Consolidation Exception"	January 1, 2016
Amendment to IFRS 11 "Accounting for Acquisitions of Interests in Joint Operations"	January 1, 2016
Amendment to IAS 1 "Disclosure Initiative"	January 1, 2016
Amendments to IAS 16 and IAS 38 "Clarification of Acceptable Methods of Depreciation and Amortization"	January 1, 2016
Amendment to IAS 19 "Defined Benefit Plans: Employee Contributions"	July 1, 2014
Amendment to IAS 27 "Equity Method in Separate Financial Statements"	January 1, 2016
Amendment to IAS 36 "Recoverable Amount Disclosures for Non-Financial Assets"	January 1, 2014
Amendment to IAS 39 "Novation of Derivatives and Continuation of Hedge Accounting"	January 1, 2014

Note 1: The aforementioned new, revised or amended standards or interpretations are effective after fiscal year beginning on or after the effective dates, unless specified otherwise.

Note 2: The amendment to IFRS 5 is applied prospectively to changes in a method of disposal that occur in annual periods beginning on or after January 1, 2016; the remaining amendments are effective for annual periods beginning on or after January 1, 2016.

Except for the following, the Company believes that the adoption of aforementioned IFRSs with effective date starting 2017 will not have a significant effect on the Company's accounting policies:

1) Amendments to IAS 36, "Recoverable Amount Disclosures for Non-Financial Assets"

The amendments to IAS 36 clarify that the Company is required to disclose the recoverable amount of an asset or a cash-generating unit only when an impairment loss on the asset has been recognized or reversed during the period. Furthermore, if the recoverable amount for which impairment loss has been recognized or reversed is fair value less costs of disposal, the Company is required to disclose the fair value hierarchy. If the fair value measurements are categorized within Level 2 or Level 3, the valuation technique and key assumptions used to measure the fair value are disclosed. The discount rate used is disclosed if such fair value less costs of disposal is measured by using present value technique. The Company expects the aforementioned amendments will result in a broader disclosure of recoverable amount for non-financial assets.

Except for the aforementioned impact, as of the date that the accompanying consolidated financial statements were authorized for issue, the Company continues in evaluating the impact on its financial position and financial performance as a result of IFRSs with effective date starting 2017. The related impact will be disclosed when the Company completes the evaluation.

c. The IFRSs issued by IASB but not yet endorsed by FSC

The Company has not applied the following IFRSs issued by the IASB but not endorsed by the FSC. The FSC announced that the Company should apply IFRS 9 and IFRS 15 starting January 1, 2018. As of the date the consolidated financial statements were authorized for issue, the FSC has not announced the effective dates of other new IFRSs.

<b><u>New, Revised or Amended Standards and Interpretations</u></b>	<b><u>Effective Date Issued by IASB (Note 3)</u></b>
Annual Improvements to IFRSs 2014-2016 Cycle	Note 4
Amendment to IFRS 2 "Classification and Measurement of Share-based Payment Transactions"	January 1, 2018
IFRS 9 "Financial Instruments"	January 1, 2018
Amendments to IFRS 9 and IFRS 7 "Mandatory Effective Date of IFRS 9 and Transition Disclosure"	January 1, 2018
Amendments to IFRS 10 and IAS 28 "Sale or Contribution of Assets between an Investor and its Associate or Joint Venture"	To be determined by IASB
IFRS 15 "Revenue from Contracts with Customers"	January 1, 2018
Amendment to IFRS 15 "Clarifications to IFRS 15"	January 1, 2018
IFRS 16 "Leases"	January 1, 2019
Amendment to IAS 7 "Disclosure Initiative"	January 1, 2017
Amendment to IAS 12 "Recognition of Deferred Tax Assets for Unrealized Losses"	January 1, 2017
IFRIC 22 "Foreign Currency Transactions and Advance Consideration"	January 1, 2018

Note 3: The aforementioned new, revised or amended standards or interpretations are effective after fiscal year beginning on or after the effective dates, unless specified otherwise.

Note 4: The amendment to IFRS 12 is retrospectively applied for annual periods beginning on or after January 1, 2017; the amendment to IAS 28 is retrospectively applied for annual periods beginning on or after January 1, 2018.

Except for the following items, the Company believes that the adoption of aforementioned standards or interpretations will not have a significant effect on the Company's accounting policies.

1) IFRS 9, "Financial Instruments"

All recognized financial assets currently in the scope of IAS 39, "Financial Instruments: Recognition and Measurement," will be subsequently measured at either the amortized cost or the fair value. The classification and measurement requirements in IFRS 9 are stated as follows:

For the debt instruments invested by the Company, if the contractual cash flows that are solely for payments of principal and interest on the principal amount outstanding, the classification and measurement requirements are stated as follows:

- a) If the objective of the Company's business model is to hold the financial asset to collect the contractual cash flows, such assets are measured at the amortized cost. Interest revenue should be recognized in profit or loss by using the effective interest method, continuously assessed for impairment and the impairment loss or reversal of impairment loss should be recognized in profit and loss.
- b) If the objective of the Company's business model is to hold the financial asset both to collect the contractual cash flows and to sell the financial assets, such assets are measured at fair value through other comprehensive income and are continuously assessed for impairment. Interest revenue should be recognized in profit or loss by using the effective interest method. A gain or loss on a financial asset measured at fair value through other comprehensive income should be recognized in other comprehensive income, except for impairment gains or losses and foreign exchange gains and losses. When such financial asset is derecognized or reclassified, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss.

The other financial assets which do not meet the aforementioned criteria should be measured at the fair value through profit or loss. However, the Company may irrevocably designate an investment in equity instruments that is not held for trading as measured at fair value through other comprehensive income. All relevant gains and losses shall be recognized in other comprehensive income, except for dividends which are recognized in profit or loss. No subsequent impairment assessment is required, and the cumulative gain or loss previously recognized in other comprehensive income cannot be reclassified from equity to profit or loss.

IFRS 9 adds a new expected loss impairment model to measure the impairment of financial assets. A loss allowance for expected credit losses should be recognized on financial assets measured at amortized cost and financial assets mandatorily measured at fair value through other comprehensive income. If the credit risk on a financial instrument has not increased significantly since initial recognition, the Company should measure the loss allowance for that financial instrument at an amount equal to 12-month expected credit losses. If the credit risk on a financial instrument has increased significantly since initial recognition and is not deemed to be a low credit risk, the Company should measure the loss allowance for that financial instrument at an amount equal to the lifetime expected credit losses. The Company should always measure the loss allowance at an amount equal to lifetime expected credit losses for trade receivables.

The main changes in hedge accounting amended the application requirements for hedge accounting to better reflect the entity's risk management activities. Compared with IAS 39, the main changes include: (1) enhancing types of transactions eligible for hedge accounting, specifically broadening the risks eligible for hedge accounting of non-financial items; (2) changing the way hedging derivative instruments are accounted for to reduce profit or loss volatility; and (3) replacing retrospective effectiveness assessment with the principle of economic relationship between the hedging instrument and the hedged item.



## 2) IFRS 15, “Revenue from Contracts with Customers” and related amendment

IFRS 15 establishes principles for recognizing revenue that apply to all contracts with customers, and will supersede IAS 18, “Revenue,” IAS 11, “Construction Contracts,” and a number of revenue-related interpretations.

When applying IFRS 15, the Company shall recognize revenue by applying the following steps:

- Identify the contract with the customer;
- Identify the performance obligations in the contract;
- Determine the transaction price;
- Allocate the transaction price to the performance obligations in the contracts; and
- Recognize revenue when the entity satisfies a performance obligation.

When IFRS 15 and related amendment are effective, the Company may elect to apply this Standard either retrospectively to each prior reporting period presented or retrospectively with the cumulative effect of initially applying this Standard recognized at the date of initial application.

## 3) IFRS 16, “Leases”

IFRS 16 sets out the accounting standards for leases that will supersede IAS 17 and a number of related interpretations.

Under IFRS 16, if the Company is a lessee, it shall recognize right-of-use assets and lease liabilities for all leases on the consolidated balance sheets except for low-value and short-term leases. The Company may elect to apply the accounting method similar to the accounting for operating lease under IAS 17 to the low-value and short-term leases. On the consolidated statements of comprehensive income, the Company should present the depreciation expense charged on the right-of-use asset separately from interest expense accrued on the lease liability; interest is computed by using effective interest method. On the consolidated statements of cash flows, cash payments for both the principal and interest portion of the lease liability are classified within financing activities.

When IFRS 16 becomes effective, the Company may elect to apply this Standard either retrospectively to each prior reporting period presented or retrospectively with the cumulative effect of the initial application of this Standard recognized at the date of initial application.

Except for the aforementioned impact, as of the date that the accompanying consolidated financial statements were authorized for issue, the Company continues in evaluating the impact on its financial position and financial performance as a result of the initial adoption of the other standards or interpretations. The related impact will be disclosed when the Company completes the evaluation.

## 4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

For the convenience of readers, the accompanying consolidated financial statements have been translated into English from the original Chinese version prepared and used in the R.O.C. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language consolidated financial statements shall prevail.

## **Statement of Compliance**

The accompanying consolidated financial statements have been prepared in conformity with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the IFRSs endorsed by the FSC with the effective dates (collectively, “Taiwan-IFRSs”).

## **Basis of Preparation**

The accompanying consolidated financial statements have been prepared on the historical cost basis except for financial instruments that are measured at fair values, as explained in the accounting policies below. Historical cost is generally based on the fair value of the consideration given in exchange for the assets.

## **Basis of Consolidation**

### The basis for the consolidated financial statements

The consolidated financial statements incorporate the financial statements of TSMC and entities controlled by TSMC (its subsidiaries).

Income and expenses of subsidiaries acquired or disposed of are included in the consolidated statement of comprehensive income from the effective date of acquisition and up to the effective date of disposal, as appropriate. Total comprehensive income of subsidiaries is attributed to the shareholders of the parent and to the noncontrolling interests even if this results in the noncontrolling interests having a deficit balance.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with those used by the Company.

All intra-group transactions, balances, income and expenses are eliminated in full on consolidation.

Changes in the Company’s ownership interests in subsidiaries that do not result in the Company losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the Company’s interests and the noncontrolling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the noncontrolling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity and attributed to shareholders of the parent.

When the Company loses control of a subsidiary, a gain or loss is recognized in profit or loss and is calculated as the difference between:

- a. the aggregate of the fair value of consideration received and the fair value of any retained interest at the date when control is lost; and
- b. the previous carrying amount of the assets (including goodwill), and liabilities of the subsidiary and any noncontrolling interest.

The Company shall account for all amounts recognized in other comprehensive income in relation to the subsidiary on the same basis as would be required if the Company had directly disposed of the related assets and liabilities.

The fair value of any investment retained in the former subsidiary at the date when control is lost is regarded as the cost on initial recognition of an investment in an associate.

## The subsidiaries in the consolidated financial statements

The detail information of the subsidiaries at the end of reporting period was as follows:

Name of Investor	Name of Investee	Main Businesses and Products	Establishment and Operating Location	Percentage of Ownership		Note	
				December 31, 2016	December 31, 2015		
TSMC	TSMC North America	Selling and marketing of integrated circuits and semiconductor devices	San Jose, California, U.S.A.	100%	100%	-	
	TSMC Japan Limited (TSMC Japan)	Marketing activities	Yokohama, Japan	100%	100%	a)	
	TSMC Partners, Ltd. (TSMC Partners)	Investing in companies involved in the design, manufacture, and other related business in the semiconductor industry	Tortola, British Virgin Islands	100%	100%	a)	
	TSMC Korea Limited (TSMC Korea)	Customer service and technical supporting activities	Seoul, Korea	100%	100%	a)	
	TSMC Europe B.V. (TSMC Europe)	Marketing and engineering supporting activities	Amsterdam, the Netherlands	100%	100%	a)	
	TSMC Global, Ltd. (TSMC Global)	Investment activities	Tortola, British Virgin Islands	100%	100%	-	
	TSMC China Company Limited (TSMC China)	Manufacturing and selling of integrated circuits at the order of and pursuant to product design specifications provided by customers	Shanghai, China	100%	100%	-	
	TSMC Nanjing Company Limited (TSMC Nanjing)	Manufacturing and selling of integrated circuits at the order of and pursuant to product design specifications provided by customers	Nanjing, China	100%	-	b)	
	VentureTech Alliance Fund III, L.P. (VTAF III)	Investing in new start-up technology companies	Cayman Islands	98%	98%	a)	
	VentureTech Alliance Fund II, L.P. (VTAF II)	Investing in new start-up technology companies	Cayman Islands	98%	98%	a)	
	Emerging Alliance Fund, L.P. (Emerging Alliance)	Investing in new start-up technology companies	Cayman Islands	-	99.5%	a), c)	
	TSMC Solar Europe GmbH	Selling of solar related products and providing customer service	Hamburg, Germany	100%	100%	a), d)	
	Chi Cherng Investment Co., Ltd. (Chi Cherng)	Investment activities	Taipei, Taiwan	-	100%	e), f)	
	VisEra Technologies Company Ltd. (VisEra Tech)	Engaged in manufacturing electronic spare parts and in researching, developing, designing, manufacturing, selling, packaging and testing of color filter	Hsin-Chu, Taiwan	87%	-	e), g)	
	TSMC Partners	TSMC Design Technology Canada Inc. (TSMC Canada)	Engineering support activities	Ontario, Canada	100%	100%	a)
		TSMC Technology, Inc. (TSMC Technology)	Engineering support activities	Delaware, U.S.A.	100%	100%	a)
TSMC Development, Inc. (TSMC Development)		Investment activities	Delaware, U.S.A.	100%	100%	-	
InveStar Semiconductor Development Fund, Inc. (ISDF)		Investing in new start-up technology companies	Cayman Islands	97%	97%	a), h)	
InveStar Semiconductor Development Fund, Inc. (II) LDC. (ISDF II)		Investing in new start-up technology companies	Cayman Islands	97%	97%	a), h)	
VisEra Holding Company (VisEra Holding)		Investing in companies involved in the design, manufacturing and other related businesses in the semiconductor industry	Cayman Islands	-	98%	a), e), g)	
TSMC Development	WaferTech, LLC (WaferTech)	Manufacturing, selling, testing and computer-aided designing of integrated circuits and other semiconductor devices	Washington, U.S.A.	100%	100%	-	
VTAF III	Mutual-Pak Technology Co., Ltd. (Mutual-Pak)	Manufacturing of electronic parts, wholesaling and retailing of electronic materials, and researching, developing and testing of RFID	New Taipei, Taiwan	58%	58%	a)	
	Growth Fund Limited (Growth Fund)	Investing in new start-up technology companies	Cayman Islands	100%	100%	a)	
VTAF III, VTAF II and Emerging Alliance	VentureTech Alliance Holdings, LLC (VTA Holdings)	Investing in new start-up technology companies	Delaware, U.S.A.	-	100%	a), c)	
VTAF III, VTAF II and TSMC	VentureTech Alliance Holdings, LLC (VTA Holdings)	Investing in new start-up technology companies	Delaware, U.S.A.	100%	-	a), c)	
VisEra Holding	VisEra Tech	Engaged in manufacturing electronic spare parts and in researching, developing, designing, manufacturing, selling, packaging and testing of color filter	Hsin-Chu, Taiwan	-	87%	e), g)	

Note a: This is an immaterial subsidiary for which the consolidated financial statements are not audited by the Company's independent accountants.

Note b: Under the investment agreement entered into with the municipal government of Nanjing, China on March 28, 2016, the Company will make an investment in Nanjing in the amount of approximately US\$3 billion to establish a subsidiary managing a 300mm wafer fab with the capacity of 20,000 12-inch wafers per month, and a design service center. TSMC Nanjing was established in May 2016.

Note c: Due to the expiration of the investment agreement between Emerging Alliance and TSMC, Emerging Alliance completed the liquidation procedures in April 2016. Emerging Alliance's ownership in VTA Holdings is held directly by TSMC.

Note d: In August 2015, TSMC Solar Ltd. (TSMC Solar) ceased its manufacturing operations. TSMC Solar and TSMC Guang Neng Investment, Ltd. (TSMC GN) were incorporated into TSMC in December 2015. After the incorporation, TSMC Solar Europe GmbH, the subsidiary of TSMC Solar, is held directly by TSMC and TSMC Solar Europe GmbH has started the liquidation procedures. TSMC Solar North America, Inc. (TSMC Solar NA), the subsidiary of TSMC Solar, completed the liquidation procedures in December 2015.

Note e: The Company acquired OmniVision Technologies, Inc.'s (OVT's) 49.1% ownership in VisEra Holding and 100% ownership in Taiwan OmniVision Investment Holding Co. (OVT Taiwan) on November 20, 2015. As a result, the Company has obtained controls of VisEra Holding and OVT Taiwan; therefore the Company has consolidated VisEra Holding, OVT Taiwan and VisEra Tech, held directly by VisEra Holding, since November 20, 2015. Please refer to Note 33.

Note f: OVT Taiwan that originally acquired by the Company was renamed as Chi Cherng in December 2015. Chi Cherng was incorporated into TSMC in December 2016.

Note g: To simplify investment structure, VisEra Tech owned by VisEra Holding was transferred to TSMC in the third quarter of 2016. In October 2016, VisEra Holding was incorporated into TSMC Partners, the subsidiary of TSMC.



## **Foreign Currencies**

The financial statements of each individual consolidated entity were expressed in the currency which reflected its primary economic environment (functional currency). The functional currency of TSMC and presentation currency of the consolidated financial statements are both New Taiwan Dollars (NT\$). In preparing the consolidated financial statements, the operating results and financial positions of each consolidated entity are translated into NT\$.

In preparing the financial statements of each individual consolidated entity, transactions in currencies other than the entity's functional currency (foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions. At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Such exchange differences are recognized in profit or loss in the year in which they arise. Non-monetary items measured at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Exchange differences arising on the retranslation of non-monetary items are included in profit or loss for the year except for exchange differences arising on the retranslation of non-monetary items in respect of which gains and losses are recognized directly in other comprehensive income, in which case, the exchange differences are also recognized directly in other comprehensive income. Non-monetary items that are measured in terms of historical cost in foreign currencies are not retranslated.

For the purposes of presenting consolidated financial statements, the assets and liabilities of the Company's foreign operations are translated into NT\$ using exchange rates prevailing at the end of each reporting period. Income and expense items are translated at the average exchange rates for the period. Exchange differences arising, if any, are recognized in other comprehensive income and accumulated in equity (attributed to noncontrolling interests as appropriate).

## **Classification of Current and Noncurrent Assets and Liabilities**

Current assets are assets held for trading purposes and assets expected to be converted to cash, sold or consumed within one year from the end of the reporting period. Current liabilities are obligations incurred for trading purposes and obligations expected to be settled within one year from the end of the reporting period. Assets and liabilities that are not classified as current are noncurrent assets and liabilities, respectively.

## **Cash Equivalents**

Cash equivalents, for the purpose of meeting short-term cash commitments, consist of highly liquid time deposits and investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

## **Financial Instruments**

Financial assets and liabilities shall be recognized when the Company becomes a party to the contractual provisions of the instruments.

Financial assets and liabilities are initially recognized at fair values. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognized immediately in profit or loss.

## **Financial Assets**

Financial assets are classified into the following specified categories: Financial assets “at fair value through profit or loss” (FVTPL), “held-to-maturity” financial assets, “available-for-sale” financial assets and “loans and receivables”. The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition. Regular way purchases or sales of financial assets are recognized and derecognized on a trade date or settlement date basis for which financial assets were classified in the same way, respectively. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the marketplace.

### Financial assets at fair value through profit or loss

Financial assets are classified as at fair value through profit or loss when the financial asset is either held for trading or it is designated as at fair value through profit or loss.

Financial assets at fair value through profit or loss are stated at fair value, with any gains or losses arising on remeasurement recognized in profit or loss.

### Held-to-maturity financial assets

Held-to-maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturity dates that the Company has the positive intent and ability to hold to maturity. Subsequent to initial recognition, held-to-maturity financial assets are measured at amortized cost using the effective interest method less any impairment.

### Available-for-sale financial assets

Available-for-sale financial assets are non-derivative financial assets that are either designated as available-for-sale or are not classified as (a) loans and receivables, (b) held-to-maturity financial assets or (c) financial assets at fair value through profit or loss.

Available-for-sale financial assets are measured at fair value. Interest income from available-for-sale monetary financial assets and dividends on available-for-sale equity investments are recognized in profit or loss. Other changes in the carrying amount of available-for-sale financial assets are recognized in other comprehensive income. When the investment is disposed of or is determined to be impaired, the cumulative gain or loss previously recognized in other comprehensive income is reclassified to profit or loss.

Dividends on available-for-sale equity instruments are recognized in profit or loss when the Company’s right to receive the dividends is established.

Available-for-sale equity instruments that do not have a quoted market price in an active market and whose fair value cannot be reliably measured are measured at cost less any identified impairment losses at the end of each reporting period. Such equity instruments are subsequently remeasured at fair value when their fair value can be reliably measured, and the difference between the carrying amount and fair value is recognized in profit or loss or other comprehensive income.

### Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Loans and receivables including cash and cash equivalents, notes and accounts receivable and other receivables are measured at amortized cost using the effective interest method, less any impairment, except for those loans and receivables with immaterial discounted effect.

### Impairment of financial assets

Financial assets, other than those carried at FVTPL, are assessed for indicators of impairment at the end of each reporting period. Those financial assets are considered to be impaired when there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial assets, their estimated future cash flows have been affected.

For financial assets carried at amortized cost, such as trade receivables, assets that are assessed not to be impaired individually are, in addition, assessed for impairment on a collective basis. The Company assesses the collectability of receivables by performing the account aging analysis and examining current trends in the credit quality of its customers.

For financial assets carried at amortized cost, the amount of the impairment loss is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the financial asset's original effective interest rate.

For financial assets measured at amortized cost, if, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment loss was recognized, the previously recognized impairment loss is reversed through profit or loss to the extent that the carrying amount of the financial assets at the date the impairment loss is reversed does not exceed what the amortized cost would have been had the impairment loss not been recognized.

When an available-for-sale financial asset is considered to be impaired, cumulative gains or losses previously recognized in other comprehensive income are reclassified to profit or loss in the year.

In respect of available-for-sale equity instruments, impairment losses previously recognized in profit or loss are not reversed through profit or loss. Any increase in fair value subsequent to the recognition of an impairment loss is recognized in other comprehensive income and accumulated under the heading of unrealized gains or losses from available-for-sale financial assets.

For financial assets carried at cost, the amount of the impairment loss is measured as the difference between the asset's carrying amount and the present value of the estimated future cash flows discounted at the current market rate of return for a similar financial asset. Such impairment loss will not be reversed in subsequent periods.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables, where the carrying amount is reduced through the use of an allowance account. When a trade receivable is considered uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against the allowance account.

### Derecognition of financial assets

The Company derecognizes a financial asset only when the contractual rights to the cash flows from the financial asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the financial asset to another entity.

On derecognition of a financial asset in its entirety, the difference between the financial asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognized in other comprehensive income and accumulated in equity is recognized in profit or loss.



## **Financial Liabilities and Equity Instruments**

### Classification as debt or equity

Debt and equity instruments issued by the Company are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

### Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Company are recognized at the proceeds received, net of direct issue costs.

### Financial liabilities

Financial liabilities are subsequently measured either at amortized cost using effective interest method or at FVTPL.

Financial liabilities are classified as at fair value through profit or loss when the financial liability is either held for trading or is designated as at fair value through profit or loss.

Financial liabilities at fair value through profit or loss are stated at fair value, with any gains or losses arising on remeasurement recognized in profit or loss.

Financial liabilities other than those held for trading purposes and designated as at FVTPL are subsequently measured at amortized cost at the end of each reporting period.

### Derecognition of financial liabilities

The Company derecognizes financial liabilities when, and only when, the Company's obligations are discharged, cancelled or they expire. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable is recognized in profit or loss.

## **Derivative Financial Instruments**

Derivative financial instruments are initially recognized at fair value at the date the derivative contracts are entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in profit or loss immediately unless the derivative financial instrument is designated and effective as a hedging instrument, in which event the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

## **Financial Instruments Designated as at Fair Value through Profit or Loss**

A financial instrument may be designated as at fair value through profit or loss (FVTPL) upon initial recognition. The financial instrument forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Company's documented risk management or investment strategy, and information about the grouping is provided internally on that basis.

## **Hedge Accounting**

The Company designates certain hedging instruments, which include stock forward contracts and interest rate futures contracts in respect of foreign currency risk, as fair value hedge. Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recognized in profit or loss immediately. Hedge accounting is discontinued prospectively when the Company revokes the designated hedging

relationship, or when the hedging instrument expires or is sold, terminated, or exercised, or when it no longer meets the criteria for hedge accounting.

The effective portion of changes in the fair value of derivative financial instruments that are designated and qualify as cash flow hedges is recognized in other comprehensive income and accumulated under the heading of cash flow hedges reserve. Amounts previously recognized in other comprehensive income and accumulated in equity are reclassified to profit or loss in the period when the hedged item is recognized in profit or loss.

### **Inventories**

Inventories are stated at the lower of cost or net realizable value. Inventories are recorded at standard cost and adjusted to approximate weighted-average cost at the end of the reporting period. Net realizable value represents the estimated selling price of inventories less all estimated costs of completion and costs necessary to make the sale.

### **Noncurrent Assets Held for Sale**

Noncurrent assets or disposal groups are classified as noncurrent assets held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. This condition is regarded as met only when the sale is highly probable and the noncurrent asset held for sale is available for immediate sale in its present condition. To meet the criteria for the sale being highly probable, the appropriate level of management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

When the committed sale plan involves loss of control of a subsidiary, all of the assets and liabilities of that subsidiary are classified as held for sale, regardless of whether a noncontrolling interest in its former subsidiary is retained after the sale.

Noncurrent assets classified as held for sale are measured at the lower of their previous carrying amount and fair value less costs to sell. Recognition of depreciation would cease.

### **Investments Accounted for Using Equity Method**

Investments accounted for using the equity method include investments in associates and interests in joint venture.

An associate is an entity over which the Company has significant influence and that is neither a subsidiary nor a joint venture. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

A joint venture is a joint arrangement whereby the Company and other parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The operating results and assets and liabilities of associates and joint venture are incorporated in these consolidated financial statements using the equity method of accounting. Under the equity method, an investment in an associate or a joint venture is initially recognized in the consolidated statement of financial position at cost and adjusted thereafter to recognize the Company's share of profit or loss and other comprehensive income of the associate and joint venture as well as the distribution received. The Company also recognizes its share in the changes in the equities of associates and joint venture.

Any excess of the cost of acquisition over the Company's share of the net fair value of the identifiable assets, liabilities and contingent liabilities of an associate or a joint venture recognized at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment. Any excess of the Company's share of the net fair value of the identifiable assets, liabilities and contingent liabilities over the cost of acquisition, after reassessment, is recognized immediately in profit or loss.

When necessary, the entire carrying amount of the investment (including goodwill) is tested for impairment as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs to sell) with its carrying amount. Any impairment loss recognized forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized to the extent that the recoverable amount of the investment subsequently increases.

The Company discontinues the use of the equity method from the date when the Company ceases to have significant influence over an associate. When the Company retains an interest in the former associate, the Company measures the retained interest at fair value at that date. The difference between the carrying amount of the associate at the date the equity method was discontinued, and the fair value of any retained interest and any proceeds from disposing of a part interest in the associate is included in the determination of the gain or loss on disposal of the associate. In addition, the Company shall account for all amounts recognized in other comprehensive income in relation to that associate on the same basis as would be required if the associate had directly disposed of the related assets or liabilities. If the Company's ownership interest in an associate is reduced as a result of disposal, but the investment continues to be an associate, the Company should reclassify to profit or loss only a proportionate amount of the gain or loss previously recognized in other comprehensive income.

When the Company subscribes to additional shares in an associate or a joint venture at a percentage different from its existing ownership percentage, the resulting carrying amount of the investment differs from the amount of the Company's proportionate interest in the net assets of the associate or joint venture. The Company records such a difference as an adjustment to investments with the corresponding amount charged or credited to capital surplus. If the Company's ownership interest is reduced due to the additional subscription to the shares of associate or joint venture by other investors, the proportionate amount of the gains or losses previously recognized in other comprehensive income in relation to that associate or joint venture shall be reclassified to profit or loss on the same basis as would be required if the associate or joint venture had directly disposed of the related assets or liabilities.

When a consolidated entity transacts with an associate or a joint venture, profits and losses resulting from the transactions with the associate or joint venture are recognized in the Company's consolidated financial statements only to the extent of interests in the associate or joint venture that are not owned by the Company.

### **Property, Plant and Equipment**

Property, plant and equipment are measured at cost less accumulated depreciation and accumulated impairment. Costs include any incremental costs that are directly attributable to the construction or acquisition of the item of property, plant and equipment.

Properties in the course of construction for production, supply or administrative purposes are carried at cost, less any recognized impairment loss. Such properties are classified to the appropriate categories of property, plant and equipment when completed and ready for intended use. Depreciation of these assets, on the same basis as other property assets, commences when the assets are ready for their intended use.

Depreciation is recognized so as to write off the cost of the assets less their residual values over their useful lives, and it is computed using the straight-line method over the following estimated useful lives: land improvements - 20 years; buildings - 5 to 20 years; machinery and equipment - 2 to 5 years; office equipment - 3 to 15 years; and leased assets - 20 years. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimates accounted for on a prospective basis. Land is not depreciated.



Assets held under finance leases are depreciated over their expected useful lives on the same basis as owned assets. However, when there is no reasonable certainty that ownership will be obtained by the end of the lease term, assets are depreciated over the shorter of the lease term and their useful lives.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the assets. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognized in profit or loss.

## **Leases**

Leases are classified as finance lease whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

### The Company as lessor

Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease.

### The Company as lessee

Assets held under finance lease are initially recognized as assets of the Company at the fair value at the inception of the lease or, if lower, at the present value of the minimum lease payments. The corresponding liability to the lessor is included in the consolidated balance sheet as an obligation under finance lease.

Lease payments are apportioned between finance expense and reduction of the lease obligation so as to achieve a constant rate of interest on the remaining balance of the liability.

Operating lease payments are recognized as an expense on a straight-line basis over the lease term.

## **Intangible Assets**

### Goodwill

Goodwill arising on an acquisition of a business is carried at cost as established at the date of acquisition of the business less accumulated impairment losses, if any.

### Other intangible assets

Other separately acquired intangible assets with finite useful lives are carried at cost less accumulated amortization and accumulated impairment losses. Amortization is recognized using the straight-line method over the following estimated useful lives: Technology license fees - the estimated life of the technology or the term of the technology transfer contract; software and system design costs - 3 years or contract period; patent and others - the economic life or contract period. The estimated useful life and amortization method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis.

## **Impairment of Tangible and Intangible Assets**

### Goodwill

Goodwill is not amortized and instead is tested for impairment annually, or more frequently when there is an indication that the cash generating unit may be impaired. For the purpose of impairment testing, goodwill is allocated to each of the Company's cash-generating units or groups of cash-generating units

that are expected to benefit from the synergies of the combination. If the recoverable amount of a cash-generating unit is less than its carrying amount, the difference is allocated first to reduce the carrying amount of any goodwill allocated to such cash generating unit and then to the other assets of the cash generating unit pro rata based on the carrying amount of each asset in the cash generating unit. Any impairment loss for goodwill is recognized directly in profit or loss. An impairment loss recognized for goodwill is not reversed in subsequent periods.

#### Other tangible and intangible assets

At the end of each reporting period, the Company reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Company estimates the recoverable amount of the cash-generating unit to which the asset belongs. When a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Recoverable amount is the higher of fair value less costs to sell and value in use. 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 for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset or cash-generating unit is estimated to be less than its carrying amount, the carrying amount of the asset or cash-generating unit is reduced to its recoverable amount. An impairment loss is recognized immediately in profit or loss.

When an impairment loss subsequently reverses, the carrying amount of the asset or a cash-generating unit is increased to the revised estimate of its recoverable amount, but the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset or cash-generating unit in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

#### **Provision**

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that the Company will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows.

#### **Guarantee Deposit**

Guarantee deposit mainly consists of cash received under deposit agreements with customers to ensure they have access to the Company's specified capacity; and as guarantee of accounts receivable to ensure payment from customers. Cash received from customers is recorded as guarantee deposit upon receipt. Guarantee deposits are refunded to customers when terms and conditions set forth in the deposit agreements have been satisfied.

#### **Revenue Recognition**

Revenue is measured at the fair value of the consideration received or receivable. Revenue is reduced for estimated customer returns, rebates and other similar allowances.

### Sale of goods

Revenue from the sale of goods is recognized when the goods are delivered and titles have passed, at which time all the following conditions are satisfied:

- The Company has transferred to the buyer the significant risks and rewards of ownership of the goods;
- The Company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;
- The amount of revenue can be measured reliably;
- It is probable that the economic benefits associated with the transaction will flow to the Company; and
- The costs incurred or to be incurred in respect of the transaction can be measured reliably.

In principle, payment term granted to customers is due 30 days from the invoice date or 30 days from the end of the month of when the invoice is issued. Due to the short term nature of the receivables from sale of goods with the immaterial discounted effect, the Company measures them at the original invoice amounts without discounting.

### Royalties, dividend and interest income

Revenue from royalties is recognized on an accrual basis in accordance with the substance of the relevant agreement, provided that it is probable that the economic benefits will flow to the Company and the amount of revenue can be measured reliably.

Dividend income from investments is recognized when the shareholder's right to receive payment has been established, provided that it is probable that the economic benefits will flow to the Company and the amount of income can be measured reliably.

Interest income from a financial asset is recognized when it is probable that the economic benefits will flow to the Company and the amount of income can be measured reliably. Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable.

## **Employee Benefits**

### Short-term employee benefits

Liabilities recognized in respect of short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in exchange for service rendered by employees.

### Retirement benefits

For defined contribution retirement benefit plans, payments to the benefit plan are recognized as an expense when the employees have rendered service entitling them to the contribution. For defined benefit retirement benefit plans, the cost of providing benefit is recognized based on actuarial calculations.

Defined benefit costs (including service cost, net interest and rereasurement) under the defined benefit retirement benefit plans are determined using the Projected Unit Credit Method. Service cost (including current service cost), and net interest on the net defined benefit liability (asset) are recognized as employee benefits expense in the period they occur. Rereasurement, comprising actuarial gains and losses and the return on plan assets (excluding interest), is recognized in other comprehensive income in the period in which they occur. Rereasurement recognized in other comprehensive income is reflected immediately in retained earnings and will not be reclassified to profit or loss.

Net defined benefit liability represents the actual deficit in the Company's defined benefit plan.



## **Share-based Payment Arrangements**

The Company elected to take the optional exemption under IFRS 1 for the share-based payment transactions granted and vested before January 1, 2012, the date of transition to Taiwan-IFRSs. There were no stock options granted prior to but unvested at the date of transition.

The compensation costs of employee stock options that were granted after January 1, 2012 are measured at the fair value of the stock options at the grant date. The fair value of the stock option granted determined at the grant date of the stock options is expensed on a straight-line basis over the vesting period, based on the Company's estimate of the number of stock options that will eventually vest, with a corresponding increase in capital surplus - employee stock option. The estimate is revised if subsequent information indicates that the number of stock options expected to vest differs from original estimates.

## **Taxation**

Income tax expense represents the sum of the tax currently payable and deferred tax.

### Current tax

Income tax on unappropriated earnings (excluding earnings from foreign consolidated subsidiaries) at a rate of 10% is expensed in the year the shareholders approved the appropriation of earnings which is the year subsequent to the year the earnings are generated.

Adjustments of prior years' tax liabilities are added to or deducted from the current year's tax provision.

### Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences, net operating loss carryforwards and unused tax credits to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates, and interests in joint venture, except where the Company is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments are only recognized to the extent that it is probable that there will be sufficient taxable profits against which to utilize the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the deferred tax asset to be recovered. The deferred tax assets which originally not recognized is also reviewed at the end of each reporting period and recognized to the extent that it is probable that sufficient taxable profits will be available to allow all or part of the deferred tax asset to be recovered.

Deferred tax liabilities and assets are measured at the tax rates that are expected to apply in the year in which the liability is settled or the asset is realized, 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 assets reflects the tax consequences that would follow from the manner in which the Company expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

### Current and deferred tax for the year

Current and deferred tax are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognized in other comprehensive income or directly in equity, respectively.

### **Business Combinations**

Acquisitions of businesses are accounted for using the acquisition method. Acquisition-related costs are generally recognized in profit or loss as incurred.

Goodwill is measured as the excess of the sum of the consideration transferred, the amount of any noncontrolling interests in the acquiree, and the fair value of the acquirer's previously held equity interest in the acquiree over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed.

Noncontrolling interests are initially measured at the noncontrolling interests' proportionate share of the fair value of the acquiree's identifiable net assets.

When a business combination is achieved in stages, the Company's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date, and the resulting gain or loss is recognized in profit or loss.

### **Insurance Claim**

The Company recognizes insurance claim reimbursement for losses incurred related to disaster damages. Insurance claim reimbursements are recorded, net of any deductible amounts, at the time while there is evidence that the claim reimbursement is virtually certain to be received.

### **Government Grants**

Government grants are not recognized until there is reasonable assurance that the Company will comply with the conditions attaching to them and that the grants will be received.

Government grants whose primary condition is that the Company should purchase, construct or otherwise acquire non-current assets (mainly including land use right and depreciable assets) are recognized as a deduction from the carrying amount of the related assets and recognized as a reduced depreciation or amortization charge in profit or loss over the contract period or useful lives of the related assets. Government grants that are receivables as compensation for expenses already incurred are deducted from incurred expenses in the period in which they become receivables.

## **5. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION AND UNCERTAINTY**

In the application of the aforementioned Company's accounting policies, the directors are required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the year in which the estimate is revised if the revision affects only that year, or in the year of the revision and future years if the revision affects both current and future years.

The following are the critical judgments, apart from those involving estimations, that the directors have made in the process of applying the Company's accounting policies and that have the most significant effect on the amounts recognized in the consolidated financial statements.

### **Revenue Recognition**

The Company recognizes revenue when the conditions described in Note 4 are satisfied. The Company also records a provision for estimated future returns and other allowances in the same period the related revenue is recorded. Provision for estimated sales returns and other allowances is generally made and adjusted based on historical experience and the consideration of varying contractual terms, and our management periodically reviews the adequacy of the estimation used.

### **Impairment of Tangible and Intangible Assets Other than Goodwill**

In the process of evaluating the potential impairment of tangible and intangible assets other than goodwill, the Company is required to make subjective judgments in determining the independent cash flows, useful lives, expected future revenue and expenses related to the specific asset groups with the consideration of the nature of semiconductor industry. Any changes in these estimates based on changed economic conditions or business strategies could result in significant impairment charges or reversal in future years.

### **Impairment of Goodwill**

The assessment of impairment of goodwill requires the Company to make subjective judgment to determine the identified cash-generating units, allocate the goodwill to relevant cash-generating units and estimate the recoverable amount of relevant cash-generating units.

### **Impairment Assessment on Investment Using Equity Method**

The Company assesses the impairment of investments accounted for using the equity method whenever triggering events or changes in circumstances indicate that an investment may be impaired and carrying value may not be recoverable. The Company measures the impairment based on a projected future cash flow of the investees, including the underlying assumptions of sales growth rate and capacity utilization rate formulated by such investees' internal management team. The Company also takes into account market conditions and the relevant industry trends to ensure the reasonableness of such assumptions.

### **Realization of Deferred Income Tax Assets**

Deferred tax assets are recognized to the extent that it is probable that future taxable profits will be available against which those deferred tax assets can be utilized. Assessment of the realization of the deferred tax assets requires the Company's subjective judgment and estimate, including the future revenue growth and profitability, tax holidays, the amount of tax credits can be utilized and feasible tax planning strategies. Any changes in the global economic environment, the industry trends and relevant laws and regulations could result in significant adjustments to the deferred tax assets.

### **Valuation of Inventory**

Inventories are stated at the lower of cost or net realizable value, and the Company uses judgment and estimate to determine the net realizable value of inventory at the end of each reporting period.

Due to the rapid technological changes, the Company estimates the net realizable value of inventory for obsolescence and unmarketable items at the end of reporting period and then writes down the cost of inventories to net realizable value. The net realizable value of the inventory is mainly determined based on assumptions of future demand within a specific time horizon.



## Recognition and Measurement of Defined Benefit Plans

Net defined benefit liability and the resulting defined benefit costs under defined benefit pension plans are calculated using the Projected Unit Credit Method. Actuarial assumptions comprise the discount rate, rate of employee turnover, and future salary increase rate. Changes in economic circumstances and market conditions will affect these assumptions and may have a material impact on the amount of the expense and the liability.

## 6. CASH AND CASH EQUIVALENTS

	December 31, 2016	December 31, 2015
Cash and deposits in banks	\$ 536,895,344	\$ 557,270,910
Repurchase agreements collateralized by corporate bonds	2,361,250	5,132,778
Commercial paper	1,997,239	-
Repurchase agreements collateralized by government bonds	<u>-</u>	<u>285,242</u>
	<u>\$ 541,253,833</u>	<u>\$ 562,688,930</u>

Deposits in banks consisted of highly liquid time deposits that were readily convertible to known amounts of cash and were subject to an insignificant risk of changes in value.

## 7. FINANCIAL ASSETS AND LIABILITIES AT FAIR VALUE THROUGH PROFIT OR LOSS

	December 31, 2016	December 31, 2015
<u>Financial assets</u>		
Held for trading		
Forward exchange contracts	\$ 142,406	\$ 6,026
Cross currency swap contracts	<u>10,976</u>	<u>-</u>
	<u>153,382</u>	<u>6,026</u>
Designated as at FVTPL		
Time deposit	6,297,708	-
Forward exchange contracts	<u>22</u>	<u>-</u>
	<u>6,297,730</u>	<u>-</u>
	<u>\$ 6,451,112</u>	<u>\$ 6,026</u>
<u>Financial liabilities</u>		
Held for trading		
Forward exchange contracts	\$ 91,585	\$ 72,610
Designated as at FVTPL		
Forward exchange contracts	<u>99,550</u>	<u>-</u>
	<u>\$ 191,135</u>	<u>\$ 72,610</u>

The Company entered into derivative contracts to manage exposures due to fluctuations of foreign exchange rates. The derivative contracts entered into by the Company did not meet the criteria for hedge accounting. Therefore, the Company did not apply hedge accounting treatment for derivative contracts.

Outstanding forward exchange contracts consisted of the following:

	<b>Maturity Date</b>	<b>Contract Amount (In Thousands)</b>
<u>December 31, 2016</u>		
Sell NT\$/Buy EUR	January 2017	NT\$5,393,329/EUR159,400
Sell NT\$/Buy JPY	January 2017	NT\$7,314,841/JPY26,501,800
Sell US\$/Buy EUR	January 2017	US\$4,180/EUR4,000
Sell US\$/Buy JPY	January 2017	US\$428/JPY50,000
Sell US\$/Buy NT\$	January 2017 to February 2017	US\$439,000/NT\$14,138,202
Sell US\$/Buy RMB	January 2017 to June 2017	US\$421,750/RMB2,908,380
<u>December 31, 2015</u>		
Sell US\$/Buy JPY	January 2016	US\$128,418/JPY15,449,355
Sell US\$/Buy RMB	January 2016	US\$226,000/RMB1,464,472
Sell US\$/Buy NT\$	January 2016 to February 2016	US\$440,000/NT\$14,434,179

Outstanding cross currency swap contracts consisted of the following:

<b>Maturity Date</b>	<b>Contract Amount (In Thousands)</b>	<b>Range of Interest Rates Paid</b>	<b>Range of Interest Rates Received</b>
<u>December 31, 2016</u>			
January 2017	US\$170,000/NT\$5,487,600	3.98%	-

## 8. AVAILABLE-FOR-SALE FINANCIAL ASSETS

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Corporate bonds	\$ 29,999,508	\$ 6,267,768
Agency bonds	14,880,482	2,627,367
Corporate issued asset-backed securities	11,254,757	3,154,366
Government bonds	8,457,362	878,377
Publicly traded stocks	<u>3,196,658</u>	<u>1,371,483</u>
	<u>\$ 67,788,767</u>	<u>\$ 14,299,361</u>

## 9. HELD-TO-MATURITY FINANCIAL ASSETS

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Corporate bonds/Bank debentures	\$ 23,849,701	\$ 8,143,146
Commercial paper	8,628,176	-
Negotiable certificate of deposit	4,829,850	4,934,250
Structured product	<u>1,609,950</u>	<u>3,000,000</u>
	<u>\$ 38,917,677</u>	<u>\$ 16,077,396</u>
Current portion	\$ 16,610,116	\$ 9,166,523
Noncurrent portion	<u>22,307,561</u>	<u>6,910,873</u>
	<u>\$ 38,917,677</u>	<u>\$ 16,077,396</u>

## 10. HEDGING DERIVATIVE FINANCIAL INSTRUMENTS

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
<u>Financial assets- current</u>		
Fair value hedges		
Interest rate futures contracts	<u>\$ 5,550</u>	<u>\$ 1,739</u>

The Company entered into interest rate futures contracts, which are used to hedge against price risk caused by changes in interest rates in the Company's investments in fixed income securities.

The outstanding interest rate futures contracts consisted of the following:

<b>Maturity Period</b>	<b>Contract Amount (US\$ in Thousands)</b>
<u>December 31, 2016</u>	
March 2017	US\$ 53,600
<u>December 31, 2015</u>	
March 2016	US\$ 13,800

## 11. NOTES AND ACCOUNTS RECEIVABLE, NET

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Notes and accounts receivable	\$ 128,815,389	\$ 85,547,926
Allowance for doubtful receivables	<u>(480,118)</u>	<u>(488,251)</u>
Notes and accounts receivable, net	<u>\$ 128,335,271</u>	<u>\$ 85,059,675</u>



In principle, the payment term granted to customers is due 30 days from the invoice date or 30 days from the end of the month of when the invoice is issued. The allowance for doubtful receivables is assessed by reference to the collectability of receivables by performing the account aging analysis, historical experience and current financial condition of customers.

Except for those impaired, for the rest of the notes and accounts receivable, the account aging analysis at the end of the reporting period is summarized in the following table. Notes and accounts receivable include amounts that are past due but for which the Company has not recognized a specific allowance for doubtful receivables after the assessment since there has not been a significant change in the credit quality of its customers and the amounts are still considered recoverable. In addition, the Company has obtained guarantee to certain receivables.

Aging analysis of notes and accounts receivable, net

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Neither past due nor impaired	\$ 108,411,408	\$ 71,482,666
Past due but not impaired		
Past due within 30 days	15,017,824	13,577,009
Past due 31-60 days	1,844,726	-
Past due 61-120 days	<u>3,061,313</u>	<u>-</u>
	<u>\$ 128,335,271</u>	<u>\$ 85,059,675</u>

Movements of the allowance for doubtful receivables

	<b>Individually Assessed for Impairment</b>	<b>Collectively Assessed for Impairment</b>	<b>Total</b>
Balance at January 1, 2016	\$ 10,241	\$ 478,010	\$ 488,251
Provision	-	321	321
Reversal/Write-off	(8,393)	-	(8,393)
Effect of exchange rate changes	<u>-</u>	<u>(61)</u>	<u>(61)</u>
Balance at December 31, 2016	<u>\$ 1,848</u>	<u>\$ 478,270</u>	<u>\$ 480,118</u>
Balance at January 1, 2015	\$ 8,093	\$ 478,637	\$ 486,730
Provision	28,593	4,814	33,407
Reversal/Write-off	(29,065)	(4,737)	(33,802)
Effect of acquisition of subsidiary	1,847	-	1,847
Effect of exchange rate changes	<u>773</u>	<u>(704)</u>	<u>69</u>
Balance at December 31, 2015	<u>\$ 10,241</u>	<u>\$ 478,010</u>	<u>\$ 488,251</u>

Aging analysis of accounts receivable that is individually determined as impaired

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Past due over 121 days	<u>\$ 1,848</u>	<u>\$ 10,241</u>

## 12. INVENTORIES

	December 31, 2016	December 31, 2015
Finished goods	\$ 8,521,873	\$ 7,974,902
Work in process	33,330,870	53,632,056
Raw materials	4,012,190	3,038,756
Supplies and spare parts	<u>2,817,300</u>	<u>2,406,556</u>
	<u>\$ 48,682,233</u>	<u>\$ 67,052,270</u>

Write-down of inventories to net realizable value (excluding earthquake losses) in the amount of NT\$1,542,779 thousand and NT\$464,361 thousand, respectively, were included in the cost of revenue for the years ended December 31, 2016 and 2015. Please refer to related earthquake losses in Note 41.

## 13. FINANCIAL ASSETS CARRIED AT COST

	December 31, 2016	December 31, 2015
Non-publicly traded stocks	\$ 2,944,859	\$ 3,268,100
Mutual funds	<u>1,157,608</u>	<u>722,782</u>
	<u>\$ 4,102,467</u>	<u>\$ 3,990,882</u>

Since there is a wide range of estimated fair values of the Company's investments in non-publicly traded stocks, the Company concludes that the fair value cannot be reliably measured and therefore should be measured at the cost less any impairment.

The stocks of Impinj, Inc. and Richwave Technology Corp. were listed in July 2016 and November 2015, respectively. Accordingly, the Company reclassified the aforementioned investments from financial assets carried at cost to available-for-sale financial assets.

## 14. INVESTMENTS ACCOUNTED FOR USING EQUITY METHOD

### a. Investments in associates

Associates consisted of the following:

Name of Associate	Principal Activities	Place of Incorporation and Operation	Carrying Amount		% of Ownership and Voting Rights Held by the Company	
			December 31, 2016	December 31, 2015	December 31, 2016	December 31, 2015
Vanguard International Semiconductor Corporation (VIS)	Research, design, development, manufacture, packaging, testing and sale of memory integrated circuits, LSI, VLSI and related parts	Hsinchu, Taiwan	\$ 8,806,384	\$ 8,446,054	28%	28%
Systems on Silicon Manufacturing Company Pte Ltd. (SSMC)	Fabrication and supply of integrated circuits	Singapore	7,163,516	9,511,515	39%	39%
Xintec Inc. (Xintec)	Wafer level chip size packaging service	Taoyuan, Taiwan	2,599,807	2,928,362	41%	41%

(Continued)

Name of Associate	Principal Activities	Place of Incorporation and Operation	Carrying Amount		% of Ownership and Voting Rights Held by the Company	
			December 31, 2016	December 31, 2015	December 31, 2016	December 31, 2015
Global Unichip Corporation (GUC)	Researching, developing, manufacturing, testing and marketing of integrated circuits	Hsinchu, Taiwan	\$ 1,174,181	\$ 1,152,335	35%	35%
Motech Industries, Inc. (Motech)	Manufacturing and sales of solar cells, crystalline silicon solar cell, and test and measurement instruments and design and construction of solar power systems	New Taipei, Taiwan	-	2,053,562	-	12%
			<u>\$ 19,743,888</u>	<u>\$ 24,091,828</u>		

(Concluded)

Starting June 2016, the Company has no longer served as Motech's board of director. As a result, the Company exercises no significant influence over Motech. Therefore, Motech is no longer accounted for using the equity method. Further, such investment was reclassified to available-for-sale financial assets and the Company recognized a disposal loss of NT\$259,960 thousand.

In June 2015, Motech merged with Topcell Solar International Co., Ltd with exchange of shares. As a result, the Company's percentage of ownership over Motech decreased to 18.0%. In the fourth quarter of 2015, the Company sold 29,160 thousand common shares of Motech and recognized a disposal gain of NT\$202,384 thousand. After the sale, the Company's percentage of ownership over Motech decreased to 12.0%. Motech continued to be accounted for using equity method as the Company still retained significant influence over Motech.

The Company acquired OVT's 49.1% ownership in VisEra Holding on November 20, 2015. As a result, the Company has obtained control of VisEra Holding and consolidated VisEra Holding since November 20, 2015. The Company included the Xintec shares held by VisEra Holding and total percentage of ownership over Xintec increased to 41.4%. To simplify investment structure, Xintec owned by VisEra Holding was transferred to TSMC in the third quarter of 2016.

In March 2015, Xintec listed its shares on the R.O.C. Over-the-Counter (Taipei Exchange). Consequently, the Company's percentage of ownership over Xintec was diluted to approximately 35.4%. In April 2015, the Company sold 2,172 thousand common shares of Xintec and recognized a disposal gain of NT\$43,017 thousand.

In the second quarter of 2015, the Company sold 82,000 thousand common shares of VIS and recognized a disposal gain of NT\$2,263,539 thousand. After the sale, the Company owned approximately 28.3 % of the equity interest in VIS.

The summarized financial information in respect of each of the Company's material associates is set out below. The summarized financial information below represents amounts shown in the associate's financial statements prepared in accordance with Taiwan-IFRSs adjusted by the Company using the equity method of accounting.

1) VIS

	December 31, 2016	December 31, 2015
Current assets	<u>\$ 25,662,921</u>	<u>\$ 24,800,749</u>
Noncurrent assets	<u>\$ 9,501,442</u>	<u>\$ 7,785,093</u>
Current liabilities	<u>\$ 5,476,672</u>	<u>\$ 4,262,001</u>
Noncurrent liabilities	<u>\$ 804,107</u>	<u>\$ 712,611</u>



	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Net revenue	<u>\$ 25,828,634</u>	<u>\$ 23,319,721</u>
Income from operations	<u>\$ 6,083,625</u>	<u>\$ 4,593,430</u>
Net income	<u>\$ 5,520,645</u>	<u>\$ 4,139,031</u>
Other comprehensive income (loss)	<u>\$ 5,592</u>	<u>\$ (61,886)</u>
Total comprehensive income	<u>\$ 5,526,237</u>	<u>\$ 4,077,145</u>
Cash dividends received	<u>\$ 1,206,981</u>	<u>\$ 1,206,414</u>

Reconciliation of the above summarized financial information to the carrying amount of the interest in the associate recognized in the consolidated balance sheets was as follows:

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Net assets	\$ 28,883,584	\$ 27,611,230
Percentage of ownership	<u>28%</u>	<u>28%</u>
The Company's share of net assets of the associate	8,179,830	7,819,500
Goodwill	<u>626,554</u>	<u>626,554</u>
Carrying amount of the investment	<u>\$ 8,806,384</u>	<u>\$ 8,446,054</u>

2) SSMC

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Current assets	<u>\$ 14,585,150</u>	<u>\$ 20,078,179</u>
Noncurrent assets	<u>\$ 5,360,076</u>	<u>\$ 6,144,263</u>
Current liabilities	<u>\$ 1,746,602</u>	<u>\$ 1,954,057</u>
Noncurrent liabilities	<u>\$ 286,340</u>	<u>\$ 303,217</u>

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Net revenue	<u>\$ 14,045,927</u>	<u>\$ 15,026,016</u>
Income from operations	<u>\$ 4,921,735</u>	<u>\$ 5,802,261</u>
Net income	<u>\$ 4,918,140</u>	<u>\$ 5,904,586</u>
Total comprehensive income	<u>\$ 4,918,140</u>	<u>\$ 5,904,586</u>
Cash dividends received	<u>\$ 4,076,170</u>	<u>\$ 1,556,592</u>

Reconciliation of the above summarized financial information to the carrying amount of the interest in the associate recognized in the consolidated balance sheets was as follows:

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Net assets	\$ 17,912,284	\$ 23,965,168
Percentage of ownership	<u>39%</u>	<u>39%</u>
The Company's share of net assets of the associate	6,948,175	9,296,089
Goodwill	213,984	213,984
Other adjustments	<u>1,357</u>	<u>1,442</u>
Carrying amount of the investment	<u>\$ 7,163,516</u>	<u>\$ 9,511,515</u>

Aggregate information of associates that are not individually material was summarized as follows:

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
The Company's share of profits (losses) of associates	<u>\$ 23,140</u>	<u>\$ (171,358)</u>
The Company's share of other comprehensive income (loss) of associates	<u>\$ (5,244)</u>	<u>\$ 7,880</u>
The Company's share of total comprehensive income (loss) of associates	<u>\$ 17,896</u>	<u>\$ (163,478)</u>

The market prices of the investments accounted for using the equity method in publicly traded stocks calculated by the closing price at the end of the reporting period are summarized as follows. The closing price represents the quoted price in active markets, the level 1 fair value measurement.

<b>Name of Associate</b>	<b>December 31, 2016</b>	<b>December 31, 2015</b>
VIS	<u>\$ 26,089,360</u>	<u>\$ 19,868,766</u>
GUC	<u>\$ 3,664,997</u>	<u>\$ 3,081,399</u>
Xintec	<u>\$ 3,622,227</u>	<u>\$ 3,605,534</u>
Motech	<u>\$ 2,636,054</u>	<u>\$ 2,636,054</u>

b. Investments in joint venture

The Company and OVT entered into a joint agreement to invest in VisEra Holding. The Company acquired OVT's 49.1% ownership in VisEra Holding on November 20, 2015. As a result, the Company has obtained control of VisEra Holding and consolidated VisEra Holding since November 20, 2015. Please refer to Note 33 for related disclosures.

## 15. PROPERTY, PLANT AND EQUIPMENT

	<b>Land and Land Improvements</b>	<b>Buildings</b>	<b>Machinery and Equipment</b>	<b>Office Equipment</b>	<b>Assets under Finance Leases</b>	<b>Equipment under Installation and Construction in Progress</b>	<b>Total</b>
<b>Cost</b>							
Balance at January 1, 2016	\$ 4,067,391	\$ 296,801,864	\$ 1,893,489,604	\$ 30,700,049	\$ 7,113	\$ 192,111,548	\$ 2,417,177,569
Additions	-	9,113,314	156,874,203	4,584,087	-	195,255,966	365,827,570
Disposals or retirements	-	(13,372)	(3,094,143)	(469,235)	-	-	(3,576,750)
Reclassification	-	-	-	7,113	(7,113)	-	-
Effect of exchange rate changes	(18,099)	(1,497,332)	(4,401,920)	(92,374)	-	(167,839)	(6,177,564)
Balance at December 31, 2016	<u>\$ 4,049,292</u>	<u>\$ 304,404,474</u>	<u>\$ 2,042,867,744</u>	<u>\$ 34,729,640</u>	<u>\$ -</u>	<u>\$ 387,199,675</u>	<u>\$ 2,773,250,825</u>
<b>Accumulated depreciation</b>							
Balance at January 1, 2016	\$ 506,185	\$ 157,910,155	\$ 1,385,857,655	\$ 19,426,069	\$ 7,113	\$ -	\$ 1,563,707,177
Additions	29,440	17,540,470	198,189,423	4,325,665	-	-	220,084,998
Disposals or retirements	-	(7,326)	(3,049,502)	(468,401)	-	-	(3,525,229)
Reclassification	-	-	-	7,113	(7,113)	-	-
Effect of exchange rate changes	(10,780)	(1,094,222)	(3,620,067)	(68,739)	-	-	(4,793,808)
Balance at December 31, 2016	<u>\$ 524,845</u>	<u>\$ 174,349,077</u>	<u>\$ 1,577,377,509</u>	<u>\$ 23,221,707</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 1,775,473,138</u>
Carrying amounts at December 31, 2016	<u>\$ 3,524,447</u>	<u>\$ 130,055,397</u>	<u>\$ 465,490,235</u>	<u>\$ 11,507,933</u>	<u>\$ -</u>	<u>\$ 387,199,675</u>	<u>\$ 997,777,687</u>
<b>Cost</b>							
Balance at January 1, 2015	\$ 4,036,785	\$ 269,163,850	\$ 1,754,170,227	\$ 27,960,835	\$ 841,154	\$ 109,334,736	\$ 2,165,507,587
Additions	-	26,960,460	142,090,400	3,428,660	-	82,595,294	255,074,814
Disposals or retirements	-	(74,941)	(5,923,022)	(1,170,037)	-	-	(7,168,000)
Lease agreement modification	-	-	-	-	(824,129)	-	(824,129)
Effect of acquisition of subsidiary	-	624,731	1,402,023	447,906	-	176,549	2,651,209
Effect of exchange rate changes	30,606	127,764	1,749,976	32,685	(9,912)	4,969	1,936,088
Balance at December 31, 2015	<u>\$ 4,067,391</u>	<u>\$ 296,801,864</u>	<u>\$ 1,893,489,604</u>	<u>\$ 30,700,049</u>	<u>\$ 7,113</u>	<u>\$ 192,111,548</u>	<u>\$ 2,417,177,569</u>
<b>Accumulated depreciation and impairment</b>							
Balance at January 1, 2015	\$ 459,140	\$ 141,245,913	\$ 1,188,388,402	\$ 16,767,934	\$ 447,397	\$ -	\$ 1,347,308,786
Additions	28,935	16,312,589	199,184,992	3,751,643	25,210	-	219,303,369
Disposals or retirements	-	(74,075)	(5,585,441)	(1,125,191)	-	-	(6,784,707)
Lease agreement modification	-	-	-	-	(460,380)	-	(460,380)
Impairment	-	278,057	2,256,785	10,742	-	-	2,545,584
Effect of exchange rate changes	18,110	147,671	1,612,917	20,941	(5,114)	-	1,794,525
Balance at December 31, 2015	<u>\$ 506,185</u>	<u>\$ 157,910,155</u>	<u>\$ 1,385,857,655</u>	<u>\$ 19,426,069</u>	<u>\$ 7,113</u>	<u>\$ -</u>	<u>\$ 1,563,707,177</u>
Carrying amounts at December 31, 2015	<u>\$ 3,561,206</u>	<u>\$ 138,891,709</u>	<u>\$ 507,631,949</u>	<u>\$ 11,273,980</u>	<u>\$ -</u>	<u>\$ 192,111,548</u>	<u>\$ 853,470,392</u>

The significant part of the Company's buildings includes main plants, mechanical and electrical power equipment and clean rooms, and the related depreciation is calculated using the estimated useful lives of 20 years, 10 years and 10 years, respectively.

For the year ended December 31, 2015, the Company recognized an impairment loss of NT\$259,568 thousand under foundry segment since the carrying amount of some of property, plant and equipment was expected to be unrecoverable. Such impairment loss was included in other operating income and expenses.

In August 2015, TSMC Solar ceased its manufacturing operations. In the third quarter of 2015, the Company recognized an impairment loss of NT\$2,286,016 thousand since the carrying amounts of certain machinery and equipment, office equipment and mechanical and electrical power equipment were not expected to be recoverable. Such impairment loss was included in other operating income and expenses.

The Company had a building lease agreement with leasing terms from December 2003 to November 2018 and such lease was accounted for as a finance lease. In August 2015, the lease was determined to be an operating lease due to a modification on lease conditions; as such, the Company recognized a gain of NT\$430,041 thousand from the modification. Such gain was included in other operating income and expenses.

## 16. INTANGIBLE ASSETS

	Goodwill	Technology License Fees	Software and System Design Costs	Patent and Others	Total
<u>Cost</u>					
Balance at January 1, 2016	\$ 6,104,784	\$ 8,454,304	\$ 19,474,428	\$ 4,879,026	\$ 38,912,542
Additions	-	1,091,261	2,788,512	519,289	4,399,062
Retirements	-	-	(5,273)	-	(5,273)
Effect of exchange rate changes	(96,809)	442	(14,072)	(11,880)	(122,319)
Balance at December 31, 2016	<u>\$ 6,007,975</u>	<u>\$ 9,546,007</u>	<u>\$ 22,243,595</u>	<u>\$ 5,386,435</u>	<u>\$ 43,184,012</u>
<u>Accumulated amortization</u>					
Balance at January 1, 2016	\$ -	\$ 4,779,388	\$ 16,431,666	\$ 3,635,608	\$ 24,846,662
Additions	-	1,367,370	1,730,834	645,202	3,743,406
Retirements	-	-	(5,273)	-	(5,273)
Effect of exchange rate changes	-	442	(12,799)	(3,272)	(15,629)
Balance at December 31, 2016	<u>\$ -</u>	<u>\$ 6,147,200</u>	<u>\$ 18,144,428</u>	<u>\$ 4,277,538</u>	<u>\$ 28,569,166</u>
Carrying amounts at December 31, 2016	<u>\$ 6,007,975</u>	<u>\$ 3,398,807</u>	<u>\$ 4,099,167</u>	<u>\$ 1,108,897</u>	<u>\$ 14,614,846</u>
<u>Cost</u>					
Balance at January 1, 2015	\$ 5,888,813	\$ 6,350,253	\$ 18,697,098	\$ 4,292,555	\$ 35,228,719
Additions	-	2,112,572	867,774	587,754	3,568,100
Retirements	-	-	(101,377)	-	(101,377)
Effect of acquisition of subsidiary	52,669	-	12,111	-	64,780
Effect of exchange rate changes	163,302	(8,521)	(1,178)	(1,283)	152,320
Balance at December 31, 2015	<u>\$ 6,104,784</u>	<u>\$ 8,454,304</u>	<u>\$ 19,474,428</u>	<u>\$ 4,879,026</u>	<u>\$ 38,912,542</u>
<u>Accumulated amortization and impairment</u>					
Balance at January 1, 2015	\$ -	\$ 3,778,912	\$ 14,861,146	\$ 3,057,151	\$ 21,697,209
Additions	-	950,867	1,672,627	578,706	3,202,200
Retirements	-	-	(101,377)	-	(101,377)
Impairment	-	58,130	384	-	58,514
Effect of exchange rate changes	-	(8,521)	(1,114)	(249)	(9,884)
Balance at December 31, 2015	<u>\$ -</u>	<u>\$ 4,779,388</u>	<u>\$ 16,431,666</u>	<u>\$ 3,635,608</u>	<u>\$ 24,846,662</u>
Carrying amounts at December 31, 2015	<u>\$ 6,104,784</u>	<u>\$ 3,674,916</u>	<u>\$ 3,042,762</u>	<u>\$ 1,243,418</u>	<u>\$ 14,065,880</u>



The Company's goodwill has been tested for impairment at the end of the annual reporting period and the recoverable amount is determined based on the value in use. The value in use was calculated based on the cash flow forecast from the financial budgets covering the future five-year period, and the Company used annual discount rate of 8.40% in its test of impairment for both December 31, 2016 and 2015 to reflect the relevant specific risk in the cash-generating unit.

For the years ended December 31, 2016 and 2015, the Company did not recognize any impairment loss on goodwill.

In August 2015, TSMC Solar ceased its manufacturing operation and the Company recognized an impairment loss of NT\$58,514 thousand in the third quarter of 2015 since the carrying amounts of technology license fees, software and system design costs were expected to be unrecoverable. Such impairment loss was included in other operating income and expenses.

## 17. OTHER ASSETS

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Tax receivable	\$ 2,325,825	\$ 2,026,509
Prepaid expenses	1,007,026	1,457,044
Net Input VAT	333,140	-
Long-term receivable	-	360,000
Others	<u>1,219,863</u>	<u>1,118,492</u>
	<u>\$ 4,885,854</u>	<u>\$ 4,962,045</u>
Current portion	\$ 3,385,422	\$ 3,533,369
Noncurrent portion	<u>1,500,432</u>	<u>1,428,676</u>
	<u>\$ 4,885,854</u>	<u>\$ 4,962,045</u>

## 18. SHORT-TERM LOANS

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Unsecured loans		
Amount	<u>\$ 57,958,200</u>	<u>\$ 39,474,000</u>
Original loan content		
US\$ (in thousands)	\$ 1,800,000	\$ 1,200,000
Annual interest rate	0.87%-1.07%	0.50%-0.77%
Maturity date	Due by January 2017	Due by February 2016

## 19. PROVISIONS

	December 31, 2016	December 31, 2015
Sales returns and allowances	\$ 18,037,789	\$ 10,163,536
Warranties	<u>28,187</u>	<u>46,304</u>
	<u>\$ 18,065,976</u>	<u>\$ 10,209,840</u>
Current portion	\$ 18,037,789	\$ 10,163,536
Noncurrent portion (classified under other noncurrent liabilities)	<u>28,187</u>	<u>46,304</u>
	<u>\$ 18,065,976</u>	<u>\$ 10,209,840</u>

	Sales Returns and Allowances	Warranties	Total
<u>Year ended December 31, 2016</u>			
Balance, beginning of year	\$ 10,163,536	\$ 46,304	\$ 10,209,840
Provision (Reversal)	36,519,312	(13,629)	36,505,683
Payment	(28,569,318)	(4,488)	(28,573,806)
Effect of exchange rate changes	<u>(75,741)</u>	<u>-</u>	<u>(75,741)</u>
Balance, end of year	<u>\$ 18,037,789</u>	<u>\$ 28,187</u>	<u>\$ 18,065,976</u>
<u>Year ended December 31, 2015</u>			
Balance, beginning of year	\$ 10,445,452	\$ 19,828	\$ 10,465,280
Provision	17,723,154	41,831	17,764,985
Payment	(18,133,061)	(14,698)	(18,147,759)
Effect of acquisition of subsidiary	126,049	-	126,049
Effect of exchange rate changes	<u>1,942</u>	<u>(657)</u>	<u>1,285</u>
Balance, end of year	<u>\$ 10,163,536</u>	<u>\$ 46,304</u>	<u>\$ 10,209,840</u>

Provisions for sales returns and allowances are estimated based on historical experience, management judgment, and any known factors that would significantly affect the returns and allowances, and are recognized as a reduction of revenue in the same year of the related product sales.

The provision for warranties represents the present value of the Company's best estimate of the future outflow of the economic benefits that will be required under the Company's obligations for warranties. The best estimate has been made on the basis of historical warranty trends of business.

## 20. BONDS PAYABLE

	December 31, 2016	December 31, 2015
Domestic unsecured bonds	\$ 154,200,000	\$ 166,200,000
Overseas unsecured bonds	<u>37,028,850</u>	<u>49,342,500</u>
	191,228,850	215,542,500
Less: Discounts on bonds payable	(35,293)	(67,306)
Less: Current portion	<u>(38,100,000)</u>	<u>(23,510,112)</u>
	<u>\$ 153,093,557</u>	<u>\$ 191,965,082</u>

The major terms of domestic unsecured bonds are as follows:

<b>Issuance</b>	<b>Tranche</b>	<b>Issuance Period</b>	<b>Total Amount</b>	<b>Coupon Rate</b>	<b>Repayment and Interest Payment</b>
100-1	A	September 2011 to September 2016	\$ 10,500,000	1.40%	Bullet repayment; interest payable annually
	B	September 2011 to September 2018	7,500,000	1.63%	The same as above
100-2	A	January 2012 to January 2017	10,000,000	1.29%	The same as above
	B	January 2012 to January 2019	7,000,000	1.46%	The same as above
101-1	A	August 2012 to August 2017	9,900,000	1.28%	The same as above
	B	August 2012 to August 2019	9,000,000	1.40%	The same as above
101-2	A	September 2012 to September 2017	12,700,000	1.28%	The same as above
	B	September 2012 to September 2019	9,000,000	1.39%	The same as above
101-3	-	October 2012 to October 2022	4,400,000	1.53%	The same as above
101-4	A	January 2013 to January 2018	10,600,000	1.23%	The same as above
	B	January 2013 to January 2020	10,000,000	1.35%	The same as above
	C	January 2013 to January 2023	3,000,000	1.49%	The same as above
102-1	A	February 2013 to February 2018	6,200,000	1.23%	The same as above
	B	February 2013 to February 2020	11,600,000	1.38%	The same as above
	C	February 2013 to February 2023	3,600,000	1.50%	The same as above
102-2	A	July 2013 to July 2020	10,200,000	1.50%	The same as above
	B	July 2013 to July 2023	3,500,000	1.70%	The same as above
102-3	A	August 2013 to August 2017	4,000,000	1.34%	The same as above
	B	August 2013 to August 2019	8,500,000	1.52%	The same as above
102-4	A	September 2013 to September 2016	1,500,000	1.35%	The same as above
	B	September 2013 to September 2017	1,500,000	1.45%	The same as above

(Continued)



Issuance	Tranche	Issuance Period	Total Amount	Coupon Rate	Repayment and Interest Payment
102-4	C	September 2013 to March 2019	\$ 1,400,000	1.60%	Bullet repayment; interest payable annually (interest for the six months prior to maturity will accrue on the basis of actual days and be repayable at maturity)
	D	September 2013 to March 2021	2,600,000	1.85%	The same as above
	E	September 2013 to March 2023	5,400,000	2.05%	The same as above
	F	September 2013 to September 2023	2,600,000	2.10%	Bullet repayment; interest payable annually

(Concluded)

The major terms of overseas unsecured bonds are as follows:

Issuance Period	Total Amount (US\$ in Thousands)	Coupon Rate	Repayment and Interest Payment
April 2013 to April 2016	\$ 350,000	0.95%	Bullet repayment; interest payable semi-annually
April 2013 to April 2018	1,150,000	1.625%	The same as above

## 21. RETIREMENT BENEFIT PLANS

### a. Defined contribution plans

The plan under the R.O.C. Labor Pension Act (the "Act") is deemed a defined contribution plan. Pursuant to the Act, TSMC, Mutual-Pak, TSMC Solar and VisEra Tech have made monthly contributions equal to 6% of each employee's monthly salary to employees' pension accounts. Furthermore, TSMC North America, TSMC China, TSMC Nanjing, TSMC Europe, TSMC Canada, TSMC Technology, TSMC Solar NA and TSMC Solar Europe GmbH also make monthly contributions at certain percentages of the basic salary of their employees. Accordingly, the Company recognized expenses of NT\$2,164,900 thousand and NT\$2,003,534 thousand in the consolidated statements of comprehensive income for the years ended December 31, 2016 and 2015, respectively.

### b. Defined benefit plans

TSMC and TSMC Solar have defined benefit plans under the R.O.C. Labor Standards Law that provide benefits based on an employee's length of service and average monthly salary for the six-month period prior to retirement. The aforementioned companies contribute an amount equal to 2% of salaries paid each month to their respective pension funds (the Funds), which are administered by the Labor Pension Fund Supervisory Committee (the Committee) and deposited in the Committee's name in the Bank of Taiwan. Before the end of each year, the Company assesses the balance in the Funds. If the amount of the balance in the Funds is inadequate to pay retirement benefits for employees who conform to retirement requirements in the next year, the Company is required to fund the difference in one

appropriation that should be made before the end of March of the next year. The Funds are operated and managed by the government's designated authorities; as such, the Company does not have any right to intervene in the investments of the Funds.

Amounts recognized in the consolidated statements of comprehensive income in respect of these defined benefit plans were as follows:

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Current service cost	\$ 132,786	\$ 134,541
Net interest expense	<u>139,355</u>	<u>144,389</u>
Components of defined benefit costs recognized in profit or loss	<u>272,141</u>	<u>278,930</u>
Remeasurement on the net defined benefit liability:		
Return on plan assets (excluding amounts included in net interest expense)	45,721	(13,707)
Actuarial loss arising from experience adjustments	38,195	297,077
Actuarial loss arising from changes in financial assumptions	694,632	544,333
Actuarial loss arising from changes in demographic assumptions	<u>278,672</u>	<u>-</u>
Components of defined benefit costs recognized in other comprehensive income	<u>1,057,220</u>	<u>827,703</u>
Total	<u>\$ 1,329,361</u>	<u>\$ 1,106,633</u>

The pension costs of the aforementioned defined benefit plans were recognized in profit or loss by the following categories:

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Cost of revenue	\$ 176,977	\$ 189,523
Research and development expenses	73,395	81,333
General and administrative expenses	17,367	3,102
Marketing expenses	<u>4,402</u>	<u>4,972</u>
	<u>\$ 272,141</u>	<u>\$ 278,930</u>

The amounts arising from the defined benefit obligation of the Company in the consolidated balance sheets were as follows:

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Present value of defined benefit obligation	\$ 12,480,480	\$ 11,318,174
Fair value of plan assets	<u>(3,929,072)</u>	<u>(3,870,148)</u>
Net defined benefit liability	<u>\$ 8,551,408</u>	<u>\$ 7,448,026</u>

Movements in the present value of the defined benefit obligation were as follows:

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Balance, beginning of year	\$ 11,318,174	\$ 10,265,284
Current service cost	132,786	134,541
Interest expense	212,909	228,444
Remeasurement losses:		
Actuarial loss arising from experience adjustments	38,195	297,077
Actuarial loss arising from changes in financial assumptions	694,632	544,333
Actuarial loss arising from changes in demographic assumptions	278,672	-
Benefits paid from plan assets	(194,888)	(146,136)
Benefits paid directly by the Company	<u>-</u>	<u>(5,369)</u>
Balance, end of year	<u>\$ 12,480,480</u>	<u>\$ 11,318,174</u>

Movements in the fair value of the plan assets were as follows:

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Balance, beginning of year	\$ 3,870,148	\$ 3,697,502
Interest income	73,554	84,055
Remeasurement gains (losses):		
Return on plan assets (excluding amounts included in net interest expense)	(45,721)	13,707
Contributions from employer	225,979	221,020
Benefits paid from plan assets	<u>(194,888)</u>	<u>(146,136)</u>
Balance, end of year	<u>\$ 3,929,072</u>	<u>\$ 3,870,148</u>

The fair value of the plan assets by major categories at the end of reporting period was as follows:

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Cash	\$ 818,426	\$ 690,821
Equity instruments	1,852,950	2,070,142
Debt instruments	<u>1,257,696</u>	<u>1,109,185</u>
	<u>\$ 3,929,072</u>	<u>\$ 3,870,148</u>

The actuarial valuations of the present value of the defined benefit obligation were carried out by qualified actuaries. The principal assumptions of the actuarial valuation were as follows:

	<b>Measurement Date</b>	
	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Discount rate	1.50%	1.90%
Future salary increase rate	3.00%	3.00%



Through the defined benefit plans under the R.O.C. Labor Standards Law, the Company is exposed to the following risks:

- 1) **Investment risk:** The pension funds are invested in equity and debt securities, bank deposits, etc. The investment is conducted at the discretion of the government's designated authorities or under the mandated management. However, under the R.O.C. Labor Standards Law, the rate of return on assets shall not be less than the average interest rate on a two-year time deposit published by the local banks and the government is responsible for any shortfall in the event that the rate of return is less than the required rate of return.
- 2) **Interest risk:** A decrease in the government bond interest rate will increase the present value of the defined benefit obligation; however, this will be partially offset by an increase in the return on the debt investments of the plan assets.

Assuming a hypothetical decrease in interest rate at the end of the reporting period contributed to a decrease of 0.5% in the discount rate and all other assumptions were held constant, the present value of the defined benefit obligation would increase by NT\$970,282 thousand and NT\$844,058 thousand as of December 31, 2016 and 2015, respectively.

- 3) **Salary risk:** The present value of the defined benefit obligation is calculated by reference to the future salaries of plan participants. As such, an increase in the salary of the plan participants will increase the present value of the defined benefit obligation.

Assuming the expected salary rate increases by 0.5% at the end of the reporting period and all other assumptions were held constant, the present value of the defined benefit obligation would increase by NT\$951,424 thousand and NT\$830,699 thousand as of December 31, 2016 and 2015, respectively.

The sensitivity analysis presented above may not be representative of the actual change in the defined benefit obligation as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

Furthermore, in presenting the above sensitivity analysis, the present value of the defined benefit obligation has been calculated using the projected unit credit method at the end of the reporting period, which is the same as that applied in calculating the defined benefit obligation liability recognized in the consolidated balance sheets.

The Company expects to make contributions of NT\$232,759 thousand to the defined benefit plans in the next year starting from December 31, 2016. The weighted average duration of the defined benefit obligation is 14 years.

## 22. GUARANTEE DEPOSITS

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Capacity guarantee	\$ 20,929,350	\$ 27,549,563
Receivables guarantee	5,559,960	-
Others	<u>181,312</u>	<u>183,051</u>
	<u>\$ 26,670,622</u>	<u>\$ 27,732,614</u>

(Continued)

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Current portion (classified under accrued expenses and other current liabilities)	\$ 12,000,189	\$ 6,167,813
Noncurrent portion	<u>14,670,433</u>	<u>21,564,801</u>
	<u>\$ 26,670,622</u>	<u>\$ 27,732,614</u>

(Concluded)

Some of guarantee deposits were refunded to customers by offsetting related accounts receivable.

## 23. EQUITY

### a. Capital stock

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Authorized shares (in thousands)	<u>28,050,000</u>	<u>28,050,000</u>
Authorized capital	<u>\$ 280,500,000</u>	<u>\$ 280,500,000</u>
Issued and paid shares (in thousands)	<u>25,930,380</u>	<u>25,930,380</u>
Issued capital	<u>\$ 259,303,805</u>	<u>\$ 259,303,805</u>

A holder of issued common shares with par value of NT\$10 per share is entitled to vote and to receive dividends.

The authorized shares include 500,000 thousand shares allocated for the exercise of employee stock options.

As of December 31, 2016, 1,072,194 thousand ADSs of TSMC were traded on the NYSE. The number of common shares represented by the ADSs was 5,360,968 thousand shares (one ADS represents five common shares).

### b. Capital surplus

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Additional paid-in capital	\$ 24,184,939	\$ 24,184,939
From merger	22,804,510	22,804,510
From convertible bonds	8,892,847	8,892,847
From share of changes in equities of subsidiaries	107,798	100,761
From share of changes in equities of associates and joint venture	282,155	317,103
Donations	<u>55</u>	<u>55</u>
	<u>\$ 56,272,304</u>	<u>\$ 56,300,215</u>

Under the relevant laws, the capital surplus generated from donations and the excess of the issuance price over the par value of capital stock (including the stock issued for new capital, mergers and convertible bonds) may be used to offset a deficit; in addition, when the Company has no deficit, such capital surplus may be distributed as cash dividends or stock dividends up to a certain percentage of TSMC's paid-in capital. The capital surplus from share of changes in equities of subsidiaries, associates and joint venture may be used to offset a deficit.

c. Retained earnings and dividend policy

In accordance with the amendments to the R.O.C. Company Act in May 2015, the recipients of dividends and bonuses are limited to shareholders and do not include employees. The amendments to TSMC's Articles of Incorporation on profits distribution policy had been approved by TSMC's shareholders in its meeting held on June 7, 2016. For policy about the profit sharing bonus to employees, please refer to Note 32.

TSMC's amended Articles of Incorporation provide that, when allocating the net profits for each fiscal year, TSMC shall first offset its losses in previous years and then set aside the following items accordingly:

- 1) Legal capital reserve at 10% of the profits left over, until the accumulated legal capital reserve equals TSMC's paid-in capital;
- 2) Special capital reserve in accordance with relevant laws or regulations or as requested by the authorities in charge;
- 3) Any balance left over shall be allocated according to the resolution of the shareholders' meeting.

TSMC's Articles of Incorporation also provide that profits of TSMC may be distributed by way of cash dividend and/or stock dividend. However, distribution of profits shall be made preferably by way of cash dividend. Distribution of profits may also be made by way of stock dividend; provided that the ratio for stock dividend shall not exceed 50% of the total distribution.

Any appropriations of the profits are subject to shareholders' approval in the following year.

The appropriation for legal capital reserve shall be made until the reserve equals the Company's paid-in capital. The reserve may be used to offset a deficit, or be distributed as dividends in cash or stocks for the portion in excess of 25% of the paid-in capital if the Company incurs no loss.

Pursuant to existing regulations, the Company is required to set aside additional special capital reserve equivalent to the net debit balance of the other components of stockholders' equity, such as the accumulated balance of foreign currency translation reserve, unrealized valuation gain/loss from available-for-sale financial assets, gain/loss from changes in fair value of hedging instruments in cash flow hedges, etc. For the subsequent decrease in the deduction amount to stockholders' equity, any special reserve appropriated may be reversed to the extent that the net debit balance reverses.

The appropriations of 2015 and 2014 earnings have been approved by TSMC's shareholders in its meetings held on June 7, 2016 and on June 9, 2015, respectively. The appropriations and dividends per share were as follows:

	<b>Appropriation of Earnings</b>		<b>Dividends Per Share (NT\$)</b>	
	<b>For Fiscal Year 2015</b>	<b>For Fiscal Year 2014</b>	<b>For Fiscal Year 2015</b>	<b>For Fiscal Year 2014</b>
Legal capital reserve	\$ 30,657,384	\$ 26,389,879		
Cash dividends to shareholders	<u>155,582,283</u>	<u>116,683,481</u>	\$6.0	\$4.5
	<u>\$ 186,239,667</u>	<u>\$ 143,073,360</u>		

TSMC's appropriations of earnings for 2016 had been approved in the meeting of the Board of Directors held on February 14, 2017. The appropriations and dividends per share were as follows:

	<u>Appropriation of Earnings</u> For Fiscal Year 2016	<u>Dividends Per Share (NT\$)</u> For Fiscal Year 2016
Legal capital reserve	\$ 33,424,718	
Cash dividends to shareholders	<u>181,512,663</u>	\$ 7.0
	<u>\$ 214,937,381</u>	

The appropriations of earnings for 2016 are to be presented for approval in the TSMC's shareholders' meeting to be held on June 8, 2017 (expected).

Under the Integrated Income Tax System that became effective on January 1, 1998, the R.O.C. resident shareholders are allowed a tax credit for their proportionate share of the income tax paid by TSMC on earnings generated since January 1, 1998.

d. Others

Changes in others were as follows:

	<u>Year Ended December 31, 2016</u>			
	<u>Foreign Currency Translation Reserve</u>	<u>Unrealized Gain/Loss from Available-for- sale Financial Assets</u>	<u>Cash Flow Hedges Reserve</u>	<u>Total</u>
Balance, beginning of year	\$ 11,039,949	\$ 734,771	\$ (607)	\$ 11,774,113
Exchange differences arising on translation of foreign operations	(9,409,190)	-	-	(9,409,190)
Other comprehensive income reclassified to profit or loss upon liquidation of subsidiaries	36,105	-	-	36,105
Changes in fair value of available-for-sale financial assets	-	(696,240)	-	(696,240)
Cumulative (gain)/loss reclassified to profit or loss upon disposal of available-for-sale financial assets	-	4,071	-	4,071
Share of other comprehensive income (loss) of associates and joint venture	(915)	24,684	712	24,481
Other comprehensive loss reclassified to profit or loss upon disposal of associates	(4,712)	(3,469)	-	(8,181)
Income tax effect	<u>-</u>	<u>(61,176)</u>	<u>-</u>	<u>(61,176)</u>
Balance, end of year	<u>\$ 1,661,237</u>	<u>\$ 2,641</u>	<u>\$ 105</u>	<u>\$ 1,663,983</u>



	<b>Year Ended December 31, 2015</b>			
	<b>Foreign Currency Translation Reserve</b>	<b>Unrealized Gain/Loss from Available-for- sale Financial Assets</b>	<b>Cash Flow Hedges Reserve</b>	<b>Total</b>
Balance, beginning of year	\$ 4,502,113	\$ 21,247,483	\$ (305)	\$ 25,749,291
Exchange differences arising on translation of foreign operations	8,061,882	-	-	8,061,882
Other comprehensive income/losses reclassified to profit or loss upon liquidation of subsidiaries	138,087	-	-	138,087
Changes in fair value of available-for-sale financial assets	-	(5,543)	-	(5,543)
Cumulative (gain)/loss reclassified to profit or loss upon disposal of available-for-sale financial assets	(1,595,413)	(20,475,233)	-	(22,070,646)
Share of other comprehensive income of associates and joint venture	(60,642)	(17,996)	(313)	(78,951)
The proportionate share of other comprehensive income/losses reclassified to profit or loss upon partial disposal of associates	(6,078)	2,051	11	(4,016)
Income tax effect	<u>-</u>	<u>(15,991)</u>	<u>-</u>	<u>(15,991)</u>
Balance, end of year	<u>\$ 11,039,949</u>	<u>\$ 734,771</u>	<u>\$ (607)</u>	<u>\$ 11,774,113</u>

The exchange differences arising on translation of foreign operation's net assets from its functional currency to TSMC's presentation currency are recognized directly in other comprehensive income and also accumulated in the foreign currency translation reserve.

Unrealized gain/loss on available-for-sale financial assets represents the cumulative gains or losses arising from the fair value measurement on available-for-sale financial assets that are recognized in other comprehensive income, excluding the amounts recognized in profit or loss for the effective portion from changes in fair value of the hedging instruments. When those available-for-sale financial assets have been disposed of or are determined to be impaired subsequently, the related cumulative gains or losses in other comprehensive income are reclassified to profit or loss.

The cash flow hedges reserve represents the cumulative effective portion of gains or losses arising on changes in fair value of the hedging instruments entered into as cash flow hedges. The cumulative gains or losses arising on changes in fair value of the hedging instruments that are recognized and accumulated in cash flow hedges reserve will be reclassified to profit or loss only when the hedge transaction affects profit or loss.

## 24. SHARE-BASED PAYMENT

TSMC's Employee Stock Option Plans, consisting of the TSMC 2004 Plan, TSMC 2003 Plan and TSMC 2002 Plan, were approved by the Securities and Futures Bureau on January 6, 2005, October 29, 2003 and June 25, 2002, respectively. The maximum number of stock options authorized to be granted under the TSMC 2004 Plan, TSMC 2003 Plan and TSMC 2002 Plan was 11,000 thousand, 120,000 thousand and 100,000 thousand, respectively, with each stock option eligible to subscribe for one common share of TSMC when exercised. The stock options may be granted to qualified employees of TSMC or any of its domestic or foreign subsidiaries, in which TSMC's shareholding with voting rights, directly or indirectly, is more than fifty percent (50%). The stock options of all the plans are valid for ten years and exercisable at certain percentages subsequent to the second anniversary of the grant date. Under the terms of the plans, the stock options are granted at an exercise price equal to the closing price of TSMC's common shares quoted on the TWSE on the grant date.

The Company did not issue employee stock option plans for years ended December 31, 2016 and 2015. Information about the TSMC's outstanding employee stock options is described as follows:

	<b>Number of Stock Options (In Thousands)</b>	<b>Weighted- average Exercise Price (NT\$)</b>
<u>Year ended December 31, 2015</u>		
Balance, beginning of year	718	\$47.2
Options exercised	<u>(718)</u>	47.2
Balance, end of year	<u>          -</u>	-
Balance exercisable, end of year	<u>          -</u>	-

The numbers of outstanding stock options and exercise prices have been adjusted to reflect the distribution of earnings by TSMC in accordance with the plans.

The employee stock options have been fully exercised in the second quarter of 2015.

## 25. NET REVENUE

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Net revenue from sale of goods	\$ 947,415,900	\$ 842,997,542
Net revenue from royalties	<u>522,444</u>	<u>499,826</u>
	<u>\$ 947,938,344</u>	<u>\$ 843,497,368</u>

## 26. OTHER OPERATING INCOME AND EXPENSES, NET

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Gain on disposal of property, plant and equipment	\$ 46,548	\$ 433,559
Impairment loss on property, plant and equipment	-	(2,545,584)
Gain from lease agreement modification	-	430,041
Others	<u>(16,735)</u>	<u>(198,634)</u>
	<u>\$ 29,813</u>	<u>\$ (1,880,618)</u>

## 27. OTHER INCOME

	Years Ended December 31	
	2016	2015
Interest income		
Bank deposits	\$ 4,892,652	\$ 3,928,030
Available-for-sale financial assets	816,185	35,811
Held-to-maturity financial assets	383,261	76,818
Structured product	<u>225,402</u>	<u>88,657</u>
	6,317,500	4,129,316
Dividend income	<u>137,401</u>	<u>621,513</u>
	<u>\$ 6,454,901</u>	<u>\$ 4,750,829</u>

## 28. FINANCE COSTS

	Years Ended December 31	
	2016	2015
Interest expense		
Corporate bonds	\$ 3,014,753	\$ 3,103,702
Bank loans	291,178	74,664
Finance leases	-	11,666
Others	<u>222</u>	<u>299</u>
	<u>\$ 3,306,153</u>	<u>\$ 3,190,331</u>

## 29. OTHER GAINS AND LOSSES

	Years Ended December 31	
	2016	2015
Gain (loss) on disposal of financial assets, net		
Available-for-sale financial assets	\$ (4,014)	\$ 22,070,736
Financial assets carried at cost	37,241	87,193
Gain (loss) on disposal of investments accounted for using equity method, net	(259,960)	2,507,707
Other gains	176,734	189,330
Net gain (loss) on financial instruments at FVTPL		
Held for trading	467,051	(1,769,253)
Designated as at FVTPL	(37,369)	-
Fair value hedges		
Gain (loss) from hedging instruments	12,725	(134,112)
Gain (loss) arising from changes in fair value of available-for-sale financial assets in hedge effective portion	4,248	(305,619)
Impairment loss of financial assets		
Financial assets carried at cost	(122,240)	(154,721)
Loss from liquidation of subsidiaries	(36,105)	(138,243)
Other losses	<u>(42,379)</u>	<u>(145,954)</u>
	<u>\$ 195,932</u>	<u>\$ 22,207,064</u>

### 30. INCOME TAX

a. Income tax expense recognized in profit or loss

Income tax expense consisted of the following:

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Current income tax expense		
Current tax expense recognized in the current year	\$ 54,315,433	\$ 45,857,504
Income tax adjustments on prior years	(1,041,762)	(992,995)
Other income tax adjustments	<u>122,461</u>	<u>247,835</u>
	<u>53,396,132</u>	<u>45,112,344</u>
Deferred income tax expense (benefit)		
The origination and reversal of temporary differences	(1,775,023)	(1,542,786)
Investment tax credits and operating loss carryforward	<u>35</u>	<u>303,186</u>
	<u>(1,774,988)</u>	<u>(1,239,600)</u>
Income tax expense recognized in profit or loss	<u>\$ 51,621,144</u>	<u>\$ 43,872,744</u>

A reconciliation of income before income tax and income tax expense recognized in profit or loss was as follows:

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Income before tax	<u>\$ 385,959,380</u>	<u>\$ 350,428,911</u>
Income tax expense at the statutory rate	\$ 66,945,088	\$ 60,666,157
Tax effect of adjusting items:		
Deductible items in determining taxable income	(51,324)	(6,332,097)
Tax-exempt income	(19,594,962)	(22,144,303)
Additional income tax under the Alternative Minimum Tax Act	-	6,041,603
Additional income tax on unappropriated earnings	11,957,213	12,103,356
The origination and reversal of temporary differences	(1,775,023)	(1,542,786)
Income tax credits	(4,940,147)	(4,243,661)
Remeasurement of operating loss carryforward	<u>(400)</u>	<u>69,635</u>
	52,540,445	44,617,904
Income tax adjustments on prior years	(1,041,762)	(992,995)
Other income tax adjustments	<u>122,461</u>	<u>247,835</u>
Income tax expense recognized in profit or loss	<u>\$ 51,621,144</u>	<u>\$ 43,872,744</u>

For the years ended December 31, 2016 and 2015, the Company applied a tax rate of 17% for entities subject to the R.O.C. Income Tax Law; for other jurisdictions, the Company measures taxes by using the applicable tax rate for each individual jurisdiction.



b. Income tax expense recognized in other comprehensive income

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Deferred income tax benefit (expense)		
Related to remeasurement of defined benefit obligation	\$ 126,867	\$ 99,326
Related to unrealized gain/loss on available-for-sale financial assets	<u>(61,176)</u>	<u>(15,991)</u>
	<u>\$ 65,691</u>	<u>\$ 83,335</u>

c. Deferred income tax balance

The analysis of deferred income tax assets and liabilities in the consolidated balance sheets was as follows:

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
<u>Deferred income tax assets</u>		
Temporary differences		
Depreciation	\$ 4,244,214	\$ 2,852,961
Provision for sales returns and allowance	1,512,061	1,141,511
Net defined benefit liability	939,543	895,486
Unrealized loss on inventories	737,247	622,741
Deferred compensation cost	378,740	316,283
Goodwill from business combination	-	10,025
Others	445,133	531,449
Operating loss carryforward	<u>14,483</u>	<u>14,518</u>
	<u>\$ 8,271,421</u>	<u>\$ 6,384,974</u>

Deferred income tax liabilities

Temporary differences		
Available-for-sale financial assets	\$ (92,447)	\$ (31,271)
Unrealized exchange gains	<u>(48,736)</u>	<u>-</u>
	<u>\$ (141,183)</u>	<u>\$ (31,271)</u>

	<b>Year Ended December 31, 2016</b>				
	<b>Balance, Beginning of Year</b>	<b>Profit or Loss</b>	<b>Other Comprehensive Income</b>	<b>Effect of Exchange Rate Changes</b>	
<u>Deferred income tax assets</u>					
Temporary differences					
Depreciation	\$ 2,852,961	\$ 1,437,648	\$ -	\$ (46,395)	\$ 4,244,214
Provision for sales returns and allowance	1,141,511	371,410	-	(860)	1,512,061
Net defined benefit liability	895,486	(82,810)	126,867	-	939,543
Unrealized loss on inventories	622,741	115,490	-	(984)	737,247
Deferred compensation cost	316,283	69,311	-	(6,854)	378,740
Goodwill from business combination	10,025	(9,836)	-	(189)	-
Others	531,449	(77,454)	-	(8,862)	445,133
Operating loss carryforward	<u>14,518</u>	<u>(35)</u>	<u>-</u>	<u>-</u>	<u>14,483</u>
	<u>\$ 6,384,974</u>	<u>\$ 1,823,724</u>	<u>\$ 126,867</u>	<u>\$ (64,144)</u>	<u>\$ 8,271,421</u>

(Continued)

	Year Ended December 31, 2016				
	Balance, Beginning of Year	Recognized in		Effect of Exchange Rate Changes	Balance, End of Year
		Profit or Loss	Other Comprehensive Income		
<u>Deferred income tax liabilities</u>					
Temporary differences					
Available-for-sale financial assets	\$ (31,271)	\$ -	\$ (61,176)	\$ -	\$ (92,447)
Unrealized exchange gains	<u>-</u>	<u>(48,736)</u>	<u>-</u>	<u>-</u>	<u>(48,736)</u>
	<u>\$ (31,271)</u>	<u>\$ (48,736)</u>	<u>\$ (61,176)</u>	<u>\$ -</u>	<u>\$ (141,183)</u>

(Concluded)

	Year Ended December 31, 2015					
	Balance, Beginning of Year	Recognized in		Effect of Acquisition of Subsidiary	Effect of Exchange Rate Changes	Balance, End of Year
		Profit or Loss	Other Comprehensive Income			
<u>Deferred income tax assets</u>						
Temporary differences						
Depreciation	\$ 1,011,065	\$ 1,808,736	\$ -	\$ 11,899	\$ 21,261	\$ 2,852,961
Provision for sales returns and allowance	1,230,752	(104,428)	-	13,815	1,372	1,141,511
Net defined benefit liability	787,391	8,769	99,326	-	-	895,486
Unrealized loss on inventories	591,871	25,088	-	4,081	1,701	622,741
Deferred compensation cost	255,621	49,348	-	-	11,314	316,283
Goodwill from business combination	195,453	(185,799)	-	-	371	10,025
Others	749,678	(243,398)	-	148	25,021	531,449
Operating loss carryforward	<u>316,951</u>	<u>(303,186)</u>	<u>-</u>	<u>-</u>	<u>753</u>	<u>14,518</u>
	<u>\$ 5,138,782</u>	<u>\$ 1,055,130</u>	<u>\$ 99,326</u>	<u>\$ 29,943</u>	<u>\$ 61,793</u>	<u>\$ 6,384,974</u>
<u>Deferred income tax liabilities</u>						
Temporary differences						
Available-for-sale financial assets	\$ (15,280)	\$ -	\$ (15,991)	\$ -	\$ -	\$ (31,271)
Unrealized exchange gains	<u>(184,470)</u>	<u>184,470</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
	<u>\$ (199,750)</u>	<u>\$ 184,470</u>	<u>\$ (15,991)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (31,271)</u>

- d. The investment operating loss carryforward and deductible temporary differences for which no deferred income tax assets have been recognized in the consolidated financial statements

The information of the operating loss carryforward for which no deferred tax assets have been recognized was as follows:

	December 31, 2016	December 31, 2015
Expiry period		
1 - 4 years	\$ 136,703	\$ 85,402
5 - 10 years	<u>41,389</u>	<u>97,831</u>
	<u>\$ 178,092</u>	<u>\$ 183,233</u>

As of December 31, 2016 and 2015, the aggregate deductible temporary differences for which no deferred income tax assets have been recognized amounted to NT\$1,919,784 thousand and NT\$1,972,286 thousand, respectively.

e. Unused operating loss carryforward and tax-exemption information

As of December 31, 2016, operating loss carryforward of Mutual-Pak consisted of the following:

	<b>Remaining Creditable Amount</b>
Expiry period	
1 - 4 years	\$ 136,703
5 - 10 years	<u>126,585</u>
	<u>\$ 263,288</u>

As of December 31, 2016, the profits generated from the following projects of TSMC are exempt from income tax for a five-year period:

	<b>Tax-exemption Period</b>
Construction and expansion of 2007 by TSMC	2014 to 2018
Construction and expansion of 2008 by TSMC	2015 to 2019
Construction and expansion of 2009 by TSMC	2018 to 2022

f. The information of unrecognized deferred income tax liabilities associated with investments

As of December 31, 2016 and 2015, the aggregate taxable temporary differences associated with investments in subsidiaries not recognized as deferred income tax liabilities amounted to NT\$83,181,401 thousand and NT\$80,919,309 thousand, respectively.

g. Integrated income tax information

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Balance of the Imputation Credit Account - TSMC	<u>\$ 82,072,562</u>	<u>\$ 59,973,516</u>

The estimated and actual creditable ratio for distribution of TSMC's earnings of 2016 and 2015 were 13.94% and 12.57%, respectively; however, effective from January 1, 2015, the creditable ratio for individual shareholders residing in the R.O.C. will be half of the original creditable ratio according to the revised Article 66 - 6 of the R.O.C. Income Tax Law.

The imputation credit allocated to shareholders is based on its balance as of the date of the dividend distribution. The estimated creditable ratio may change when the actual distribution of the imputation credit is made.

All of TSMC's earnings generated prior to December 31, 1997 have been appropriated.

h. Income tax examination

The tax authorities have examined income tax returns of TSMC through 2013. All investment tax credit adjustments assessed by the tax authorities have been recognized accordingly.

### 31. EARNINGS PER SHARE

	<u>Years Ended December 31</u>	
	<u>2016</u>	<u>2015</u>
Basic EPS	<u>\$12.89</u>	<u>\$11.82</u>
Diluted EPS	<u>\$12.89</u>	<u>\$11.82</u>

EPS is computed as follows:

	<b>Amounts (Numerator)</b>	<b>Number of Shares (Denominator) (In Thousands)</b>	<b>EPS (NT\$)</b>
<u>Year ended December 31, 2016</u>			
Basic/Diluted EPS			
Net income available to common shareholders of the parent	<u>\$ 334,247,180</u>	<u>25,930,380</u>	<u>\$12.89</u>
<u>Year ended December 31, 2015</u>			
Basic EPS			
Net income available to common shareholders of the parent	\$ 306,573,837	25,930,288	<u>\$11.82</u>
Effect of dilutive potential common shares	<u>-</u>	<u>92</u>	
Diluted EPS			
Net income available to common shareholders of the parent (including effect of dilutive potential common shares)	<u>\$ 306,573,837</u>	<u>25,930,380</u>	<u>\$11.82</u>

### 32. ADDITIONAL INFORMATION OF EXPENSES BY NATURE

	<u>Years Ended December 31</u>	
	<u>2016</u>	<u>2015</u>
a. Depreciation of property, plant and equipment		
Recognized in cost of revenue	\$ 203,476,848	\$ 204,126,243
Recognized in operating expenses	16,583,067	15,152,174
Recognized in other operating income and expenses	<u>25,083</u>	<u>24,952</u>
	<u>\$ 220,084,998</u>	<u>\$ 219,303,369</u>
b. Amortization of intangible assets		
Recognized in cost of revenue	\$ 2,028,492	\$ 1,642,051
Recognized in operating expenses	<u>1,714,914</u>	<u>1,560,149</u>
	<u>\$ 3,743,406</u>	<u>\$ 3,202,200</u>
c. Research and development costs expensed as incurred	<u>\$ 71,207,703</u>	<u>\$ 65,544,579</u>



	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
d. Employee benefits expenses		
Post-employment benefits		
Defined contribution plans	\$ 2,164,900	\$ 2,003,534
Defined benefit plans	<u>272,141</u>	<u>278,930</u>
	2,437,041	2,282,464
Other employee benefits	<u>97,248,082</u>	<u>89,322,946</u>
	<u>\$ 99,685,123</u>	<u>\$ 91,605,410</u>
Employee benefits expense summarized by function		
Recognized in cost of revenue	\$ 58,493,500	\$ 52,983,173
Recognized in operating expenses	<u>41,191,623</u>	<u>38,622,237</u>
	<u>\$ 99,685,123</u>	<u>\$ 91,605,410</u>

In accordance with the amendments to the R.O.C. Company Act in May 2015 and the amended TSMC's Articles of Incorporation approved by TSMC's shareholders in its meeting held on June 7, 2016, TSMC shall allocate compensation to directors and profit sharing bonus to employees of TSMC not more than 0.3% and not less than 1% of annual profits during the period, respectively. Prior to the amendments, TSMC's Articles of Incorporation provided that, when allocating the net profits for each fiscal year, TSMC shall first set aside legal capital reserve and special capital reserve, then set aside not more than 0.3% of the balance as compensation to directors and not less than 1% as profit sharing bonus to employees, respectively.

TSMC accrued profit sharing bonus to employees based on a percentage of net income before income tax, profit sharing bonus to employees and compensation to directors during the period, which amounted to NT\$22,418,339 thousand and NT\$20,556,888 thousand for the years ended December 31, 2016 and 2015, respectively; Compensation to directors was expensed based on estimated amount payable. If there is a change in the proposed amounts after the annual consolidated financial statements are authorized for issue, the differences are recorded as a change in accounting estimate.

The Board of Directors of TSMC held on February 14, 2017 approved the profit sharing bonus to employees and compensation to directors in the amounts of NT\$22,418,339 thousand and NT\$376,432 thousand in cash for 2016, respectively. There is no significant difference between the aforementioned approved amounts and the amounts charged against earnings of 2016.

TSMC's profit sharing bonus to employees and compensation to directors in the amounts of NT\$20,556,888 thousand and NT\$356,186 thousand in cash for 2015, respectively, had been approved by the Board of Directors on February 2, 2016. The profit sharing bonus to employees and compensation to directors in cash for 2015 had been reported to TSMC's shareholders in its meeting held on June 7, 2016, after the amended TSMC's Articles of Incorporation had been approved. The aforementioned approved amount has no difference with the one recognized in the consolidated financial statements for the year ended December 31, 2015.

TSMC's profit sharing bonus to employees and compensation to directors in the amounts of NT\$17,645,966 thousand and NT\$406,854 thousand in cash for 2014, respectively, had been approved by the shareholders in its meetings held on June 9, 2015. The aforementioned approved amount has no difference with the one recognized in the consolidated financial statements for the year ended December 31, 2014.

The information about the appropriations of TSMC's profit sharing bonus to employees and compensation to directors is available at the Market Observation Post System website.

### 33. CONSOLIDATION OF SUBSIDIARY

Due to a Chinese consortium's acquisition of OVT, major shareholders of VisEra Holding and OVT Taiwan, the Company acquired OVT's 49.1% ownership in VisEra Holding and 100% ownership in OVT Taiwan on November 20, 2015. The related information is as follows:

a. Subsidiaries acquired

	<b>Principal Activity</b>	<b>Date of Acquisition</b>	<b>Proportion of Voting Equity Interests Acquired (%)</b>	<b>Consideration Transferred</b>
VisEra Holding	Investing in companies involved in the design, manufacturing and other related businesses in the semiconductor industry	November 20, 2015	49.1	<u>\$ 3,536,119</u>
OVT Taiwan	Investment activities	November 20, 2015	100	<u>\$ 394,674</u>

b. Considerations transferred

	<b>VisEra Holding</b>	<b>OVT Taiwan</b>
Cash	<u>\$ 3,536,119</u>	<u>\$ 394,674</u>

c. Assets acquired and liabilities assumed at the date of acquisition

	<b>VisEra Holding</b>	<b>OVT Taiwan</b>
<b>Current assets</b>		
Cash and cash equivalents	\$ 3,858,482	\$ 20,710
Accounts receivable	511,999	-
Inventories	59,050	-
Other financial assets	706,500	373,813
Other current assets	26,441	155
<b>Noncurrent assets</b>		
Investments accounted for using equity method	721,641	-
Property, plant and equipment	2,651,209	-
Intangible assets	12,111	-
Deferred income tax assets	29,943	-
Refundable deposits	<u>15,611</u>	<u>-</u>
	<u>8,592,987</u>	<u>394,678</u>
<b>Current liabilities</b>		
Financial liabilities at fair value through profit or loss	975	-
Accounts payable	87,480	-
Salary and bonus payable	183,090	-

(Continued)

	<b>VisEra Holding</b>	<b>OVT Taiwan</b>
Accrued profit sharing bonus to employees and compensation to directors and supervisors	\$ 45,819	\$ 4
Payables to contractors and equipment suppliers	132,305	-
Income tax payable	47,860	-
Provisions	126,049	-
Accrued expenses and other current liabilities	102,851	-
Noncurrent liabilities		
Guarantee deposits	<u>1,279</u>	<u>-</u>
	<u>727,708</u>	<u>4</u>
Net assets	<u>\$ 7,865,279</u>	<u>\$ 394,674</u> (Concluded)

d. Goodwill arising on acquisition

	<b>VisEra Holding</b>
Consideration transferred	\$ 3,536,119
Fair value of investments previously owned	3,458,146
Less: Fair value of identifiable net assets acquired	(7,865,279)
Noncontrolling interests	<u>923,683</u>
Goodwill arising on acquisition	<u>\$ 52,669</u>

e. Net cash outflow on acquisition of subsidiaries

	<b>VisEra Holding</b>	<b>OVT Taiwan</b>
Consideration paid in cash	\$ 3,536,119	\$ 394,674
Less: Cash and cash equivalent balances acquired	<u>(3,858,482)</u>	<u>(20,710)</u>
	<u>\$ (322,363)</u>	<u>\$ 373,964</u>

f. Impact of acquisitions on the results of the Company

The results of VisEra Holding since the acquisition date included in the consolidated statements of comprehensive income for the year ended December 31, 2015 were as follows:

	<b>VisEra Holding</b>
Net revenue	<u>\$ 254,319</u>
Net income	<u>\$ 16,264</u>

Had the business combination of VisEra Holding been in effect on January 1, 2015, the Company's net revenue and net income for the year ended December 31, 2015 would have been NT\$846,401,819 thousand and NT\$306,687,674 thousand, respectively. This pro-forma information is for illustrative purposes only and is not necessarily an indication of revenue and results of operations of the Company that actually would have been achieved had the acquisition been completed on January 1, 2015, nor is it intended to be a projection of future results. The aforementioned pro-forma net revenue and net income were calculated based on the fair value of assets acquired and liabilities assumed at the date of acquisition.

### 34. DISPOSAL OF SUBSIDIARY

In January 2015, the Board of Directors of TSMC approved a sale of TSMC SSL common shares of 565,480 thousand held by TSMC and TSMC GN to Epistar Corporation. The transaction was completed in February 2015.

a. Consideration received from the disposal

Total consideration received	\$ 825,000
Expenditure associated with consideration received	<u>(142,475)</u>
Net consideration received	<u>\$ 682,525</u>

b. Analysis of assets and liabilities over which the control was lost

Assets	
Cash and cash equivalents	\$ 81,478
Inventories	28,519
Other current assets	91,331
Property, plant and equipment	643,699
Intangible assets	47,373
Others	<u>51,808</u>
	<u>944,208</u>
Liabilities	
Salary and bonus payable	38,151
Accrued expenses and other current liabilities	68,132
Net defined benefit liability	35,845
Others	<u>76,915</u>
	<u>219,043</u>
Net assets disposed of	<u>\$ 725,165</u>

c. Gain/loss on disposal of subsidiary

Net consideration received	\$ 682,525
Net assets disposed of	(725,165)
Noncontrolling interests	<u>42,640</u>
Gain/loss on disposal of subsidiary	<u>\$ -</u>

d. Net cash inflow arising from disposal of subsidiary

Net consideration received	\$ 682,525
Less: Balance of cash and cash equivalents disposed of	<u>81,478</u>
	<u>\$ 601,047</u>



### 35. CAPITAL MANAGEMENT

The Company requires significant amounts of capital to build and expand its production facilities and acquire additional equipment. In consideration of the industry dynamics, the Company manages its capital in a manner to ensure that it has sufficient and necessary financial resources to fund its working capital needs, capital asset purchases, research and development activities, dividend payments, debt service requirements and other business requirements associated with its existing operations over the next 12 months.

### 36. FINANCIAL INSTRUMENTS

#### a. Categories of financial instruments

	December 31, 2016	December 31, 2015
Financial assets		
FVTPL		
Held for trading	\$ 153,382	\$ 6,026
Designated as at FVTPL	6,297,730	-
Available-for-sale financial assets (Note)	71,891,234	18,290,243
Held-to-maturity financial assets	38,917,677	16,077,396
Derivative financial instruments in designated hedge accounting relationships	5,550	1,739
Loans and receivables		
Cash and cash equivalents	541,253,833	562,688,930
Notes and accounts receivable (including related parties)	129,304,830	85,565,397
Other receivables	2,626,401	4,790,376
Refundable deposits	<u>407,874</u>	<u>430,802</u>
	<u>\$ 790,858,511</u>	<u>\$ 687,850,909</u>
Financial liabilities		
FVTPL		
Held for trading	\$ 91,585	\$ 72,610
Designated as at FVTPL	99,550	-
Amortized cost		
Short-term loans	57,958,200	39,474,000
Accounts payable (including related parties)	27,324,525	19,725,274
Payables to contractors and equipment suppliers	63,154,514	26,012,192
Accrued expenses and other current liabilities	20,713,259	18,900,123
Bonds payable (including long-term liabilities-current portion)	191,193,557	215,475,194
Long-term bank loans (including long-term liabilities-current portion)	31,460	40,000
Other long-term payables (classified under accrued expenses and other current liabilities)	-	18,000
Guarantee deposits (including those classified under accrued expenses and other current liabilities)	<u>26,670,622</u>	<u>27,732,614</u>
	<u>\$ 387,237,272</u>	<u>\$ 347,450,007</u>

Note : Including financial assets carried at cost.

b. Financial risk management objectives

The Company seeks to ensure sufficient cost-efficient funding readily available when needed. The Company manages its exposure to foreign currency risk, interest rate risk, equity price risk, credit risk and liquidity risk with the objective to reduce the potentially adverse effects the market uncertainties may have on its financial performance.

The plans for material treasury activities are reviewed by Audit Committees and/or Board of Directors in accordance with procedures required by relevant regulations or internal controls. During the implementation of such plans, Corporate Treasury function must comply with certain treasury procedures that provide guiding principles for overall financial risk management and segregation of duties.

c. Market risk

The Company is exposed to the market risks arising from changes in foreign exchange rates, interest rates and the prices in equity investments, and utilizes some derivative financial instruments to reduce the related risks.

Foreign currency risk

Most of the Company's operating activities are denominated in foreign currencies. Consequently, the Company is exposed to foreign currency risk. To protect against reductions in value and the volatility of future cash flows caused by changes in foreign exchange rates, the Company utilizes derivative financial instruments, including currency forward contracts and cross currency swaps, to hedge its currency exposure. These instruments help to reduce, but do not eliminate, the impact of foreign currency exchange rate movements.

The Company also holds short-term borrowings in foreign currencies in proportion to its expected future cash flows. This allows foreign-currency-denominated borrowings to be serviced with expected future cash flows and provides a partial hedge against transaction translation exposure.

The Company's sensitivity analysis to foreign currency risk mainly focuses on the foreign currency monetary items at the end of the reporting period. Assuming an unfavorable 10% movement in the levels of foreign exchanges against the New Taiwan dollar, the net income for the years ended December 31, 2016 and 2015 would have decreased by NT\$111,347 thousand and NT\$902,083 thousand, respectively, after taking into consideration of the hedging contracts and the hedged items.

Interest rate risk

The Company is exposed to interest rate risk arising from borrowing at both fixed and floating interest rates and from fixed income securities. All of the Company's long-term bonds have fixed interest rates and are measured at amortized cost. As such, changes in interest rates would not affect the future cash flows. On the other hand, because interest rates of the Company's long-term bank loans are floating, changes in interest rates would affect the future cash flows but not the fair value.

Assuming the amount of floating interest rate bank loans at the end of the reporting period had been outstanding for the entire period and all other variables were held constant, a hypothetical increase in interest rates of 100 basis point (1%) would have resulted in an increase in the interest expense, net of tax, by approximately NT\$261 thousand and NT\$332 thousand for the years ended December 31, 2016 and 2015, respectively.

The Company classified fixed income securities as held-to-maturity and available-for-sale financial assets. Because held-to-maturity fixed income securities are measured at amortized cost, changes in interest rates would not affect the fair value. On the other hand, available-for-sale fixed income securities are exposed to fair value fluctuations caused by changes in interest rates. To manage its exposure to the fair value fluctuations, the Company enters into interest rate futures contract to hedge against price risk caused by changes in risk-free interest rates in the Company's investments in available-for-sale fixed income securities.

Assuming a hypothetical increase of 100 basis point (1%) in interest rates of available-for-sale fixed income securities at the end of the reporting period, the net income for the years ended December 31, 2016 and 2015 would have been unaffected as they were classified as available-for-sale; however, the other comprehensive income for the years ended December 31, 2016 and 2015 would have decreased by NT\$1,600,929 thousand and NT\$271,547 thousand, respectively.

#### Other price risk

The Company is exposed to equity price risk arising from available-for-sale equity investments.

Assuming a hypothetical decrease of 5% in equity prices of the equity investments at the end of the reporting period, the net income for the years ended December 31, 2016 and 2015 would have been unaffected as they were classified as available-for-sale; however, the other comprehensive income for the years ended December 31, 2016 and 2015 would have decreased by NT\$342,565 thousand and NT\$259,996 thousand, respectively.

#### d. Credit risk management

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Company. The Company is exposed to credit risk from operating activities, primarily trade receivables, and from investing activities, primarily deposits, fixed-income investments and other financial instruments with banks. Credit risk is managed separately for business related and financial related exposures. As of the end of the reporting period, the Company's maximum credit risk exposure is mainly from the carrying amount of financial assets recognized in the consolidated balance sheet.

#### Business related credit risk

The Company has considerable trade receivables outstanding with its customers worldwide. A substantial majority of the Company's outstanding trade receivables are not covered by collateral or credit insurance. While the Company has procedures to monitor and limit exposure to credit risk on trade receivables, there can be no assurance such procedures will effectively limit its credit risk and avoid losses. This risk is heightened during periods when economic conditions worsen.

As of December 31, 2016 and 2015, the Company's ten largest customers accounted for 74% and 68% of accounts receivable, respectively. The Company believes the concentration of credit risk is insignificant for the remaining accounts receivable.

#### Financial credit risk

The Company regularly monitors and reviews the transaction limit applied to counterparties and adjusts the concentration limit according to market conditions and the credit standing of the counterparties. The Company mitigates its exposure by selecting counterparties with investment-grade credit ratings.

e. Liquidity risk management

The objective of liquidity risk management is to ensure the Company has sufficient liquidity to fund its business requirements associated with existing operations over the next 12 months. The Company manages its liquidity risk by maintaining adequate cash.

The table below summarizes the maturity profile of the Company's financial liabilities based on contractual undiscounted payments, including principal and interest.

	<b>Less Than 1 Year</b>	<b>2-3 Years</b>	<b>4-5 Years</b>	<b>5+ Years</b>	<b>Total</b>
<u>December 31, 2016</u>					
<u>Non-derivative financial liabilities</u>					
Short-term loans	\$ 57,974,562	\$ -	\$ -	\$ -	\$ 57,974,562
Accounts payable (including related parties)	27,324,525	-	-	-	27,324,525
Payables to contractors and equipment suppliers	63,154,514	-	-	-	63,154,514
Accrued expenses and other current liabilities	20,713,259	-	-	-	20,713,259
Bonds payable	40,669,468	99,161,486	35,340,742	22,979,426	198,151,122
Long-term bank loans	10,543	20,116	2,423	-	33,082
Guarantee deposits (including those classified under accrued expenses and other current liabilities)	<u>12,000,189</u>	<u>13,060,483</u>	<u>1,609,950</u>	<u>-</u>	<u>26,670,622</u>
	<u>221,847,060</u>	<u>112,242,085</u>	<u>36,953,115</u>	<u>22,979,426</u>	<u>394,021,686</u>
<u>Derivative financial instruments</u>					
Forward exchange contracts					
Outflows	40,571,841	-	-	-	40,571,841
Inflows	<u>(40,586,344)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(40,586,344)</u>
	<u>(14,503)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(14,503)</u>
Cross currency swap contracts					
Outflows	5,478,066	-	-	-	5,478,066
Inflows	<u>(5,487,600)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(5,487,600)</u>
	<u>(9,534)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(9,534)</u>
	<u>\$ 221,823,023</u>	<u>\$ 112,242,085</u>	<u>\$ 36,953,115</u>	<u>\$ 22,979,426</u>	<u>\$ 393,997,649</u>
<u>December 31, 2015</u>					
<u>Non-derivative financial liabilities</u>					
Short-term loans	\$ 39,488,957	\$ -	\$ -	\$ -	\$ 39,488,957
Accounts payable (including related parties)	19,725,274	-	-	-	19,725,274
Payables to contractors and equipment suppliers	26,012,192	-	-	-	26,012,192
Accrued expenses and other current liabilities	18,900,123	-	-	-	18,900,123
Bonds payable	26,494,990	104,462,371	68,378,787	25,981,316	225,317,464
Long-term bank loans	8,800	21,540	12,741	-	43,081
Other long-term payables (classified under accrued expenses and other current liabilities)	18,000	-	-	-	18,000
Guarantee deposits (including those classified under accrued expenses and other current liabilities)	<u>6,167,813</u>	<u>13,341,051</u>	<u>8,223,750</u>	<u>-</u>	<u>27,732,614</u>
	<u>136,816,149</u>	<u>117,824,962</u>	<u>76,615,278</u>	<u>25,981,316</u>	<u>357,237,705</u>
<u>Derivative financial instruments</u>					
Forward exchange contracts					
Outflows	23,192,477	-	-	-	23,192,477
Inflows	<u>(23,135,579)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(23,135,579)</u>
	<u>56,898</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>56,898</u>
	<u>\$ 136,873,047</u>	<u>\$ 117,824,962</u>	<u>\$ 76,615,278</u>	<u>\$ 25,981,316</u>	<u>\$ 357,294,603</u>



f. Fair value of financial instruments

1) Fair value measurements recognized in the consolidated balance sheets

Fair value measurements are grouped into Levels 1 to 3 based on the degree to which the fair value is observable:

- Level 1 fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 fair value measurements are those derived from inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- Level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

2) Fair value of financial instruments that are measured at fair value on a recurring basis

Fair value hierarchy

The following table presents the Company's financial assets and liabilities measured at fair value on a recurring basis:

	<u>December 31, 2016</u>			
	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
<u>Financial assets at FVTPL</u>				
Held for trading				
Forward exchange contracts	\$ -	\$ 142,406	\$ -	\$ 142,406
Cross currency swap contracts	-	10,976	-	10,976
Designated as at FVTPL				
Time deposit	-	6,297,708	-	6,297,708
Forward exchange contracts	-	22	-	22
	<u>\$ -</u>	<u>\$ 6,451,112</u>	<u>\$ -</u>	<u>\$ 6,451,112</u>
<u>Available-for-sale financial assets</u>				
Corporate bonds	\$ 29,999,508	\$ -	\$ -	\$ 29,999,508
Agency bonds	14,880,482	-	-	14,880,482
Corporate issued asset-backed securities	-	11,254,757	-	11,254,757
Government bonds	8,457,362	-	-	8,457,362
Publicly traded stocks	<u>3,196,658</u>	<u>-</u>	<u>-</u>	<u>3,196,658</u>
	<u>\$ 56,534,010</u>	<u>\$ 11,254,757</u>	<u>\$ -</u>	<u>\$ 67,788,767</u>
<u>Hedging derivative financial assets</u>				
Interest rate futures contracts	<u>\$ 5,550</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 5,550</u>
<u>Financial liabilities at FVTPL</u>				
Held for trading				
Forward exchange contracts	\$ -	\$ 91,585	\$ -	\$ 91,585
Designated as at FVTPL				
Forward exchange contracts	<u>-</u>	<u>99,550</u>	<u>-</u>	<u>99,550</u>
	<u>\$ -</u>	<u>\$ 191,135</u>	<u>\$ -</u>	<u>\$ 191,135</u>

	<b>December 31, 2015</b>			
	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Total</b>
<u>Financial assets at FVTPL</u>				
Held for trading				
Forward exchange contracts	\$ _____	\$ 6,026	\$ _____	\$ 6,026
<u>Available-for-sale financial assets</u>				
Corporate bonds	\$ 6,267,768	\$ -	\$ -	\$ 6,267,768
Corporate issued asset-backed securities	-	3,154,366	-	3,154,366
Agency bonds	2,627,367	-	-	2,627,367
Publicly traded stocks	1,371,483	-	-	1,371,483
Government bonds	878,377	-	-	878,377
	<u>\$ 11,144,995</u>	<u>\$ 3,154,366</u>	<u>\$ _____</u>	<u>\$ 14,299,361</u>
<u>Hedging derivative financial assets</u>				
Interest rate futures contracts	\$ 1,739	\$ _____	\$ _____	\$ 1,739
<u>Financial liabilities at FVTPL</u>				
Held for trading				
Forward exchange contracts	\$ _____	\$ 72,610	\$ _____	\$ 72,610

There were no transfers between Level 1 and Level 2 for the years ended December 31, 2016 and 2015, respectively.

There were no purchases and disposals for assets on Level 3 for the years ended December 31, 2016 and 2015, respectively.

#### Valuation techniques and assumptions used in fair value measurement

The fair values of financial assets and financial liabilities are determined as follows:

- The fair values of financial assets and financial liabilities with standard terms and conditions and traded on active liquid markets are determined with reference to quoted market prices (includes interest rate futures contracts, publicly traded stocks, money market funds, government bonds, agency bonds and corporate bonds).
- Forward exchange contracts and cross currency swap contracts are measured using quoted forward exchange rates and yield curves derived from quoted interest rates matching maturities of the contracts. For investments in corporate issued asset-backed securities and time deposit, the fair value are determined using quoted market prices or the present value of future cash flows based on the observable yield curves.

#### 3) Fair value of financial instruments that are not measured at fair value

Except as detailed in the following table, the Company considers that the carrying amounts of financial instruments that are not measured at fair value recognized in the consolidated financial statements approximate their fair values.

	December 31, 2016		December 31, 2015	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
<u>Financial assets</u>				
Held-to-maturity financial assets				
Corporate bonds/Bank debentures	\$ 23,849,701	\$ 23,996,429	\$ 8,143,146	\$ 8,146,756
Commercial paper	8,628,176	8,630,769	-	-
Negotiable certificate of deposit	4,829,850	4,847,785	4,934,250	4,945,878
Structured product	1,609,950	1,609,738	3,000,000	2,995,731

Financial liabilities

Measured at amortized cost				
Bonds payable	191,193,557	192,845,296	215,475,194	216,223,736

Fair value hierarchy

The table below sets out the balances for the Company's assets and liabilities that are not measured at fair value but for which the fair value is disclosed:

	December 31, 2016			
	Level 1	Level 2	Level 3	Total
<u>Assets</u>				
Held-to-maturity securities				
Corporate bonds/Bank debentures	\$ 23,996,429	\$ -	\$ -	\$ 23,996,429
Commercial paper	-	8,630,769	-	8,630,769
Negotiable certificate of deposit	-	4,847,785	-	4,847,785
Structured product	-	1,609,738	-	1,609,738
	<u>\$ 23,996,429</u>	<u>\$ 15,088,292</u>	<u>\$ -</u>	<u>\$ 39,084,721</u>

Liabilities

Measured at amortized cost				
Bonds payable	<u>\$ 192,845,296</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 192,845,296</u>

	December 31, 2015			
	Level 1	Level 2	Level 3	Total
<u>Assets</u>				
Held-to-maturity securities				
Corporate bonds/Bank debentures	\$ 8,146,756	\$ -	\$ -	\$ 8,146,756
Negotiable certificate of deposit	-	4,945,878	-	4,945,878
Structured product	-	2,995,731	-	2,995,731
	<u>\$ 8,146,756</u>	<u>\$ 7,941,609</u>	<u>\$ -</u>	<u>\$ 16,088,365</u>

Liabilities

Measured at amortized cost				
Bonds payable	<u>\$ 216,223,736</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 216,223,736</u>

### Fair value measurement

For investments in bonds, the fair value is determined using active market prices.

For investments in commercial paper, negotiable certificate of deposit and structured product, the fair value is determined using the present value of future cash flows based on the observable yield curves.

The fair value of the Company's bonds payable is determined using active market prices.

## **37. RELATED PARTY TRANSACTIONS**

Intercompany balances and transactions between TSMC and its subsidiaries, which are related parties of TSMC, have been eliminated upon consolidation; therefore those items are not disclosed in this note. The following is a summary of significant transactions between the Company and other related parties:

### a. Net revenue

<u>Item</u>	<u>Related Party Categories</u>	<u>Years Ended December 31</u>	
		<u>2016</u>	<u>2015</u>
Net revenue from sale of goods	Associates	\$ 5,929,141	\$ 4,253,961
	Joint venture	<u>-</u>	<u>1,206</u>
		<u>\$ 5,929,141</u>	<u>\$ 4,255,167</u>
Net revenue from royalties	Associates	<u>\$ 516,749</u>	<u>\$ 489,420</u>

### b. Purchases

<u>Related Party Categories</u>	<u>Years Ended December 31</u>	
	<u>2016</u>	<u>2015</u>
Associates	<u>\$ 10,108,210</u>	<u>\$ 11,126,415</u>

### c. Receivables from related parties

<u>Item</u>	<u>Related Party Categories</u>	<u>December 31,</u>	<u>December 31,</u>
		<u>2016</u>	<u>2015</u>
Receivables from related parties	Associates	<u>\$ 969,559</u>	<u>\$ 505,722</u>
Other receivables from related parties	Associates	<u>\$ 146,788</u>	<u>\$ 125,018</u>



d. Payables to related parties

<u>Item</u>	<u>Related Party Categories</u>	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Payables to related parties	Associates	<u>\$ 1,262,174</u>	<u>\$ 1,149,988</u>

e. Acquisition of property, plant and equipment

<u>Related Party Categories</u>	<u>Acquisition Price</u>	
	<u>Years Ended December 31</u>	
	<u>2016</u>	<u>2015</u>
Associates	<u>\$ -</u>	<u>\$ 26,207</u>

f. Others

<u>Item</u>	<u>Related Party Categories</u>	<u>Years Ended December 31</u>	
		<u>2016</u>	<u>2015</u>
Manufacturing expenses	Associates	\$ 1,389,164	\$ 2,321,858
	Joint venture	<u>-</u>	<u>12,819</u>
		<u>\$ 1,389,164</u>	<u>\$ 2,334,677</u>
Research and development expenses	Associates	\$ 161,735	\$ 142,833
	Joint venture	<u>-</u>	<u>1,398</u>
		<u>\$ 161,735</u>	<u>\$ 144,231</u>

The sales prices and payment terms to related parties were not significantly different from those of sales to third parties. For other related party transactions, price and terms were determined in accordance with mutual agreements.

The Company leased machinery and equipment, factory and office from Xintec and VIS. The lease terms and prices were both determined in accordance with mutual agreements. The rental expenses were paid to Xintec and VIS quarterly or monthly; the related expenses were both classified under manufacturing expenses.

The Company deferred the disposal gain/loss derived from sales of property, plant and equipment to related parties (transactions with associates and joint venture), and then recognized such gain/loss over the depreciable lives of the disposed assets.

g. Compensation of key management personnel

The compensation to directors and other key management personnel for the years ended December 31, 2016 and 2015 were as follows:

	<u>Years Ended December 31</u>	
	<u>2016</u>	<u>2015</u>
Short-term employee benefits	\$ 2,023,971	\$ 1,883,013
Post-employment benefits	<u>3,992</u>	<u>10,926</u>
	<u>\$ 2,027,963</u>	<u>\$ 1,893,939</u>

The compensation to directors and other key management personnel were determined by the Compensation Committee of TSMC in accordance with the individual performance and the market trends.

### 38. PLEDGED ASSETS

The Company provided certificate of deposits recorded in other financial assets as collateral mainly for building lease agreements. As of December 31, 2016 and 2015, the aforementioned other financial assets amounted to NT\$185,698 thousand and NT\$177,229 thousand, respectively.

### 39. SIGNIFICANT OPERATING LEASE ARRANGEMENTS

The Company leases several parcels of land, office premises and certain office equipment. These operating leases expire between January 2017 and June 2066 and can be renewed upon expiration.

The Company expensed the lease payments as follows:

	<u>Years Ended December 31</u>	
	<u>2016</u>	<u>2015</u>
Minimum lease payments	<u>\$ 1,135,735</u>	<u>\$ 995,983</u>

Future minimum lease payments under the above non-cancellable operating leases are as follows:

	<u>December 31,</u> <u>2016</u>	<u>December 31,</u> <u>2015</u>
Not later than 1 year	\$ 1,321,546	\$ 1,099,017
Later than 1 year and not later than 5 years	3,677,432	3,635,180
Later than 5 years	<u>6,623,957</u>	<u>6,921,891</u>
	<u>\$ 11,622,935</u>	<u>\$ 11,656,088</u>

#### 40. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED COMMITMENTS

Significant contingent liabilities and unrecognized commitments of the Company as of the end of the reporting period, excluding those disclosed in other notes, were as follows:

- a. Under a technical cooperation agreement with Industrial Technology Research Institute, the R.O.C. Government or its designee approved by TSMC can use up to 35% of TSMC's capacity provided TSMC's outstanding commitments to its customers are not prejudiced. The term of this agreement is for five years beginning from January 1, 1987 and is automatically renewed for successive periods of five years unless otherwise terminated by either party with one year prior notice. As of December 31, 2016, the R.O.C. Government did not invoke such right.
- b. Under a Shareholders Agreement entered into with Philips and EDB Investments Pte Ltd. on March 30, 1999, the parties formed a joint venture company, SSMC, which is an integrated circuit foundry in Singapore. TSMC's equity interest in SSMC was 32%. Nevertheless, in September 2006, Philips spun-off its semiconductor subsidiary which was renamed as NXP B.V. Further, TSMC and NXP B.V. purchased all the SSMC shares owned by EDB Investments Pte Ltd. pro rata according to the Shareholders Agreement on November 15, 2006. After the purchase, TSMC and NXP B.V. currently own approximately 39% and 61% of the SSMC shares, respectively. TSMC and NXP B.V. are required, in the aggregate, to purchase at least 70% of SSMC's capacity, but TSMC alone is not required to purchase more than 28% of the capacity. If any party defaults on the commitment and the capacity utilization of SSMC falls below a specific percentage of its capacity, the defaulting party is required to compensate SSMC for all related unavoidable costs. There was no default from the aforementioned commitment as of December 31, 2016.
- c. In June 2010, Keranos, LLC. filed a complaint in the U.S. District Court for the Eastern District of Texas alleging that TSMC, TSMC North America, and several other leading technology companies infringe three expired U.S. patents. In response, TSMC, TSMC North America, and several co-defendants in the Texas case filed a lawsuit against Keranos in the U.S. District Court for the Northern District of California in November 2010, seeking a judgment declaring that they did not infringe the asserted patents, and that those patents were invalid. These two litigations have been consolidated into a single lawsuit in the U.S. District Court for the Eastern District of Texas. In February 2014, the Court entered a final judgment in favor of TSMC and TSMC North America, dismissing all of Keranos's claims against TSMC and TSMC North America with prejudice. Keranos appealed the final judgment to the U.S. Court of Appeals for the Federal Circuit, and in August 2015, the Federal Circuit remanded the case back to the Texas court for further proceedings. In January 2017, the Texas court dismissed all of Keranos's claims against TSMC and TSMC North America with prejudice, and dismissed TSMC's and TSMC North America's counterclaims without prejudice. The case is over as to TSMC and TSMC North America.
- d. In December 2010, Ziptronix, Inc. filed a complaint in the U.S. District Court for the Northern District of California accusing TSMC, TSMC North America and one other company of infringing several U.S. patents. In September 2014, the Court granted summary judgment of noninfringement in favor of TSMC and TSMC North America. Ziptronix, Inc. can appeal the Court's order. In August 2015, Tessera Technologies, Inc. announced it had acquired Ziptronix. In February 2017, the Court dismissed all of Ziptronix's claims against TSMC and TSMC North America with prejudice.
- e. TSMC joined the Customer Co-Investment Program of ASML and entered into the investment agreement in August 2012. The agreement includes an investment of EUR837,816 thousand by TSMC Global to acquire 5% of ASML's equity with a lock-up period of 2.5 years. TSMC Global has acquired the aforementioned equity on October 31, 2012. The lock-up period expired on May 1, 2015 and as of October 8, 2015, all ASML shares had been disposed.

Both parties also signed the research and development funding agreement whereby TSMC shall provide EUR276,000 thousand to ASML's research and development programs from 2013 to 2017. As of

December 31, 2016, TSMC has paid EUR228,603 thousand to ASML under the research and development funding agreement.

- f. In March 2014, DSS Technology Management, Inc. (DSS) filed a complaint in the U.S. District Court for the Eastern District of Texas alleging that TSMC, TSMC North America, TSMC Development and several other companies infringe one U.S. patent. TSMC Development has subsequently been dismissed. In May 2015, the Court entered a final judgment of noninfringement in favor of TSMC and TSMC North America. DSS appealed the final judgment to the U.S. Court of Appeals for the Federal Circuit (Federal Circuit). In November 2015, the Patent Trial and Appeal Board (PTAB) determined after concluding an Inter Partes Review (IPR) that the patent claims asserted by DSS in the District Court litigation are unpatentable. DSS appealed the PTAB's decision to the Federal Circuit in January 2016. In March 2016, the District Court's judgment of noninfringement was affirmed by the Federal Circuit. In April 2016, the District Court litigation between the parties and the related Federal Circuit appeal were dismissed, and the appeal proceeding of the PTAB's decision is also over as to TSMC.
- g. Amounts available under unused letters of credit as of December 31, 2016 and 2015 were NT\$122,356 thousand and NT\$144,738 thousand, respectively.

#### 41. SIGNIFICANT LOSS FROM DISASTER

On February 6, 2016, an earthquake struck Taiwan. The resulting damage was mostly to inventories and equipment. The Company recognized related earthquake losses of NT\$2,492,138 thousand, net of insurance claim, for the year ended December 31, 2016. Such losses were primarily included in cost of revenue.

#### 42. EXCHANGE RATE INFORMATION OF FOREIGN-CURRENCY FINANCIAL ASSETS AND LIABILITIES

The following information was summarized according to the foreign currencies other than the functional currency of the Company. The exchange rates disclosed were used to translate the foreign currencies into the functional currency. The significant financial assets and liabilities denominated in foreign currencies were as follows:

	Foreign Currencies (In Thousands)	Exchange Rate (Note 1)	Carrying Amount (In Thousands)
<u>December 31, 2016</u>			
<u>Financial assets</u>			
Monetary items			
USD	\$ 5,042,715	32.199	\$ 162,370,381
EUR	19,556	34.30	670,767
JPY	37,024,347	0.2775	10,274,256
Non-monetary items			
HKD	257,056	4.15	1,066,780
<u>Financial liabilities</u>			
Monetary items			
USD	4,000,930	32.199	128,825,952
EUR	183,922	34.30	6,308,513
JPY	61,062,114	0.2775	16,944,737

(Continued)



	<b>Foreign Currencies (In Thousands)</b>	<b>Exchange Rate (Note 1)</b>	<b>Carrying Amount (In Thousands)</b>
<u>December 31, 2015</u>			
<u>Financial assets</u>			
Monetary items			
USD	\$ 3,089,634	32.895	\$ 101,633,497
USD	251,824	6.494(Note 2)	8,283,759
EUR	43,933	36.00	1,581,571
JPY	9,717,089	0.2733	2,655,680
Non-monetary items			
HKD	166,727	4.24	706,924

Financial liabilities

Monetary items			
USD	2,952,404	32.895	97,119,331
EUR	44,174	36.00	1,590,264
JPY	26,416,113	0.2733	7,219,524
			(Concluded)

Note 1: Except as otherwise noted, exchange rate represents the number of N.T. dollars for which one foreign currency could be exchanged.

Note 2: The exchange rate represents the number of RMB for which one USD dollars could be exchanged.

The realized and unrealized foreign exchange gain and loss were net gains of NT\$1,161,322 thousand and NT\$2,481,446 thousand for the years ended December 31, 2016 and 2015, respectively. Since there were varieties of foreign currency transactions and functional currencies within the subsidiaries of the Company, the Company was unable to disclose foreign exchange gain (loss) towards each foreign currency with significant impact.

#### **43. OPERATING SEGMENTS INFORMATION**

a. Operating segments

The Company's only reportable segment is the foundry segment. The foundry segment engages mainly in the manufacturing, selling, packaging, testing and computer-aided design of integrated circuits and other semiconductor devices and the manufacturing of masks. The Company also had other operating segments that did not exceed the quantitative threshold for separate reporting. These segments mainly engaged in the researching, developing, designing, manufacturing and selling of renewable energy and efficiency related technologies and products.

The Company uses the income from operations as the measurement for segment profit and the basis of performance assessment. There was no material differences between the accounting policies of the operating segment and the accounting policies described in Note 4.

b. Segment revenue and operating results

	Foundry	Others	Total
<u>Year ended December 31, 2016</u>			
Net revenue from external customers	\$ 947,938,344	\$ -	\$ 947,938,344
Income from operations	377,957,778	-	377,957,778
Share of profits of associates and joint venture	3,495,600	-	3,495,600
Income tax expense	51,621,144	-	51,621,144
<u>Year ended December 31, 2015</u>			
Net revenue from external customers	842,690,157	807,211	843,497,368
Income (loss) from operations	320,833,219	(785,444)	320,047,775
Share of profits (loss) of associates and joint venture	4,517,699	(385,571)	4,132,128
Income tax expense (benefit)	43,874,515	(1,771)	43,872,744

c. Geographic information

	<u>Net Revenue from External Customers</u>		<u>Non-current Assets</u>	
	<u>Years Ended December 31, 2016</u>	<u>2015</u>	<u>December 31, 2016</u>	<u>December 31, 2015</u>
Taiwan	\$ 127,062,984	\$ 90,169,543	\$ 991,567,870	\$ 844,173,826
United States	610,371,107	566,600,178	8,245,054	8,892,851
Asia	146,907,470	123,705,876	14,071,364	15,889,993
Europe, the Middle East and Africa	58,042,311	57,064,965	8,677	8,278
Others	<u>5,554,472</u>	<u>5,956,806</u>	<u>-</u>	<u>-</u>
	<u>\$ 947,938,344</u>	<u>\$ 843,497,368</u>	<u>\$ 1,013,892,965</u>	<u>\$ 868,964,948</u>

The Company categorized the net revenue mainly based on the country in which the customer is headquartered. Non-current assets include property, plant and equipment, intangible assets and other noncurrent assets.

d. Production information

<b>Production</b>	<u>Years Ended December 31</u>	
	<u>2016</u>	<u>2015</u>
Wafer	\$ 909,179,151	\$ 802,937,969
Others	<u>38,759,193</u>	<u>40,559,399</u>
	<u>\$ 947,938,344</u>	<u>\$ 843,497,368</u>

e. Major customers representing at least 10% of net revenue

	<u>Years Ended December 31</u>			
	<u>2016</u>		<u>2015</u>	
	<u>Amount</u>	<u>%</u>	<u>Amount</u>	<u>%</u>
Customer A	\$ 157,185,418	17	\$ 134,117,206	16
Customer B	107,463,238	11	134,158,421	16

#### 44. ADDITIONAL DISCLOSURES

Following are the additional disclosures required by the Securities and Futures Bureau for TSMC:

- a. Financings provided: Please see Table 1 attached;
- b. Endorsement/guarantee provided: Please see Table 2 attached;
- c. Marketable securities held (excluding investments in subsidiaries, associates and joint venture): Please see Table 3 attached;
- d. Marketable securities acquired and disposed of at costs or prices of at least NT\$300 million or 20% of the paid-in capital: Please see Table 4 attached;
- e. Acquisition of individual real estate properties at costs of at least NT\$300 million or 20% of the paid-in capital: Please see Table 5 attached;
- f. Disposal of individual real estate properties at prices of at least NT\$300 million or 20% of the paid-in capital: None;
- g. Total purchases from or sales to related parties of at least NT\$100 million or 20% of the paid-in capital: Please see Table 6 attached;
- h. Receivables from related parties amounting to at least NT\$100 million or 20% of the paid-in capital: Please see Table 7 attached;
- i. Information about the derivative financial instruments transaction: Please see Notes 7 and 10;
- j. Others: The business relationship between the parent and the subsidiaries and significant transactions between them: Please see Table 8 attached;
- k. Names, locations, and related information of investees over which TSMC exercises significant influence (excluding information on investment in mainland China): Please see Table 9 attached;
- l. Information on investment in mainland China
  - 1) The name of the investee in mainland China, the main businesses and products, its issued capital, method of investment, information on inflow or outflow of capital, percentage of ownership, income (losses) of the investee, share of profits/losses of investee, ending balance, amount received as dividends from the investee, and the limitation on investee: Please see Table 10 attached.
  - 2) Significant direct or indirect transactions with the investee, its prices and terms of payment, unrealized gain or loss, and other related information which is helpful to understand the impact of investment in mainland China on financial reports: Please see Table 8 attached.

## Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

## FINANCINGS PROVIDED

FOR THE YEAR ENDED DECEMBER 31, 2016

(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

No.	Financing Company	Counter-party	Financial Statement Account	Related Party	Maximum Balance for the Period (RMB in Thousands) (Note 2)	Ending Balance (RMB in Thousands) (Note 2)	Amount Actually Drawn (RMB in Thousands)	Interest Rate	Nature for Financing	Transaction Amounts	Reason for Financing (Note 3)	Allowance for Bad Debt	Collateral		Financing Limits for Each Borrowing Company (Note 1)	Financing Company's Total Financing Amount Limits (Note 1)
													Item	Value		
1	TSMC China	TSMC Nanjing	Other receivables from related parties	Yes	\$ 21,313,180 (RMB4,600,000)	\$ 21,313,180 (RMB4,600,000)	\$ 4,169,970 (RMB 900,000)	0.35%-1.5%	The need for short-term/long-term financing (Note 3)	\$ -	Operating capital	\$ -	\$ -	\$ 42,850,549 (Note 1)	\$ 42,850,549 (Note 1)	

Note 1: The total amount for lending to a company for a short-term period shall not exceed ten percent (10%) of the net worth of TSMC China. In addition, the total amount lendable to any one borrower shall be no more than thirty percent (30%) of the borrower's net worth. The above restriction does not apply to the subsidiaries whose voting shares are 100% owned, directly or indirectly, by TSMC. However, the total amount lendable to 100% owned subsidiaries by TSMC shall not exceed forty percent (40%) of the net worth of TSMC China. When there is a lending for funding needs by TSMC China to TSMC, or to the subsidiaries, which are not located in Taiwan, directly or indirectly wholly owned by TSMC, the lending will not be subject to the restriction set forth in the above paragraph of this Article. Notwithstanding the foregoing, the aggregate amount available for lending and the total amount lending limit for such borrower still shall not exceed the net worth of TSMC China.

Note 2: The maximum balance for the period and ending balance represent the amounts approved by the Board of Directors.

Note 3: The restriction of the term of each loan for funding not exceeding one year shall not apply to inter-company loans for funding between offshore subsidiaries in which the Company holds, directly or indirectly, 100% of the voting shares.



**TABLE 2**

**Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries**

**ENDORSEMENTS/GUARANTEES PROVIDED  
FOR THE YEAR ENDED DECEMBER 31, 2016  
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)**

No.	Endorsement/ Guarantee Provider	Guaranteed Party		Limits on Endorsement/ Guarantee Amount Provided to Each Guaranteed Party (Notes 1 and 2)	Maximum Balance for the Period for the Period (US\$ in Thousands) (Note 3)	Ending Balance (US\$ in Thousands) (Note 3)	Amount Actually Drawn (US\$ in Thousands)	Amount of Endorsement/ Guarantee Collateralized by Properties	Ratio of Accumulated Endorsement/ Guarantee to Net Equity per Latest Financial Statements	Maximum Endorsement/ Guarantee Amount Allowable (Note 2)	Guarantee Provided by Parent Company	Guarantee Provided by A Subsidiary	Guarantee Provided to Subsidiaries in Mainland China
		Name	Nature of Relationship										
0	TSMC	TSMC Global	Subsidiary	\$ 347,312,065	\$ 48,298,500 (US\$ 1,500,000)	\$ 37,028,850 (US\$ 1,150,000)	\$ 37,028,850 (US\$ 1,150,000)	\$ -	2.67%	\$ 347,312,065	Yes	No	No
		TSMC North America	Subsidiary	347,312,065	2,679,385 (US\$ 83,213)	2,679,385 (US\$ 83,213)	2,679,385 (US\$ 83,213)	-	0.19%	347,312,065	Yes	No	No

Note 1: The total amount of the guarantee provided by TSMC to any individual entity shall not exceed ten percent (10%) of TSMC's net worth, or the net worth of such entity. However, subsidiaries whose voting shares are 100% owned, directly or indirectly, by TSMC are not subject to the above restrictions after the approval of the Board of Directors.

Note 2: The total amount of guarantee shall not exceed twenty-five percent (25%) of TSMC's net worth.

Note 3: The maximum balance for the period and ending balance represent the amounts approved by the Board of Directors.

## Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

## MARKETABLE SECURITIES HELD

DECEMBER 31, 2016

(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2016			Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	
TSMC	Corporate bond	-	Held-to-maturity financial assets	-	\$ 1,967,303	N/A	\$ 1,969,240
	CPC Corporation, Taiwan	-	"	-	400,250	N/A	400,389
	Hon Hai Precision Ind. Co., Ltd.	-	"	-	200,848	N/A	200,865
	Taiwan Power Company	-	"	-	150,742	N/A	150,763
	Nan Ya Plastics Corporation	-	"	-	100,219	N/A	100,403
	Formosa Petrochemical Corporation	-	"	-	-	-	-
	Commercial paper	-	Held-to-maturity financial assets	865	8,628,176	N/A	8,630,769
	Taiwan Power Company	-	"	-	-	-	-
	Stock	-	Available-for-sale financial assets	58,320	1,650,450	12	1,650,450
	Motech	-	"	21,105	1,066,780	1	1,066,780
	Semiconductor Manufacturing International Corporation	-	"	2,208	126,722	4	126,722
	RichWave Technology Corp.	-	Financial assets carried at cost	21,230	193,584	10	193,584
	United Industrial Gases Co., Ltd.	-	"	10,500	105,000	7	105,000
Shin-Etsu Handokai Taiwan Co., Ltd.	-	"	11,124	99,041	6	99,041	
Global Investment Holding Inc.	-	"	2,560	18,121	2	18,121	
W.K. Technology Fund IV	-	"	-	-	-	-	
Fund	-	Financial assets carried at cost	-	11,259	12	11,259	
Horizon Ventures Fund	-	"	-	8,263	1	8,263	
Crimson Asia Capital	-	"	-	-	-	-	
TSMC Partners	Common stock	-	Financial assets carried at cost	10,440	US\$ 65,000	25	US\$ 65,000
	Tela Innovations	-	"	6,333	-	13	-
	Meube Inc.	-	"	-	-	-	-
TSMC Global	Fund	-	Financial assets carried at cost	-	US\$ 7,291	9	US\$ 7,291
	China Walden Venture Investments II, L.P.	-	"	-	US\$ 4,270	6	US\$ 4,270
	Shanghai Walden Venture Capital Enterprise	-	"	-	-	-	-
	Corporate bond	-	Available-for-sale financial assets	-	US\$ 29,886	N/A	US\$ 29,886
	Bank of America Corp.	-	"	-	US\$ 26,231	N/A	US\$ 26,231
	JPMorgan Chase & Co.	-	"	-	US\$ 25,451	N/A	US\$ 25,451
	Morgan Stanley	-	"	-	US\$ 18,769	N/A	US\$ 18,769
	Goldman Sachs Group Inc.	-	"	-	US\$ 17,059	N/A	US\$ 17,059
	Verizon Communications	-	"	-	US\$ 16,819	N/A	US\$ 16,819
	Citigroup Inc.	-	"	-	US\$ 13,850	N/A	US\$ 13,850
	Abbvie Inc.	-	"	-	US\$ 13,332	N/A	US\$ 13,332
	AT&T Inc.	-	"	-	US\$ 11,850	N/A	US\$ 11,850
	Gilead Sciences Inc.	-	"	-	US\$ 11,618	N/A	US\$ 11,618
Aetna Inc.	-	"	-	US\$ 11,598	N/A	US\$ 11,598	
PNC Bank NA	-	"	-	US\$ 10,533	N/A	US\$ 10,533	
Capital One NA	-	"	-	US\$ 10,405	N/A	US\$ 10,405	
Oracle Corp.	-	"	-	-	-	-	

(Continued)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2016			Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	
TSMC Global	Svenska Handelsbanken AB	-	Available-for-sale financial assets	-	US\$ 9,837	N/A	US\$ 9,837
	CVS Health Corp.	-	"	-	US\$ 9,736	N/A	US\$ 9,736
	Westpac Banking Corp.	-	"	-	US\$ 8,905	N/A	US\$ 8,905
	Anheuser Busch InBev Fin.	-	"	-	US\$ 8,737	N/A	US\$ 8,737
	Ford Motor Credit Co LLC	-	"	-	US\$ 8,681	N/A	US\$ 8,681
	Analog Devices, Inc.	-	"	-	US\$ 8,619	N/A	US\$ 8,619
	Teva Pharmaceuticals Netherlands	-	"	-	US\$ 8,467	N/A	US\$ 8,467
	American Intl. Group	-	"	-	US\$ 7,944	N/A	US\$ 7,944
	Credit Suisse New York	-	"	-	US\$ 7,267	N/A	US\$ 7,267
	BB&T Corporation	-	"	-	US\$ 7,189	N/A	US\$ 7,189
	BMW US Capital LLC	-	"	-	US\$ 7,180	N/A	US\$ 7,180
	Priscoa Global Funding I	-	"	-	US\$ 7,140	N/A	US\$ 7,140
	Daimler Finance NA LLC	-	"	-	US\$ 7,101	N/A	US\$ 7,101
	Bank of Ny Mellon Corp.	-	"	-	US\$ 7,006	N/A	US\$ 7,006
	BP Capital Markets PLC	-	"	-	US\$ 6,658	N/A	US\$ 6,658
	ERAC USA Finance LLC	-	"	-	US\$ 6,623	N/A	US\$ 6,623
	Duke Energy Corp.	-	"	-	US\$ 6,535	N/A	US\$ 6,535
	Southern Co.	-	"	-	US\$ 6,510	N/A	US\$ 6,510
	Ventus Realty LP/Cap Cpr.	-	"	-	US\$ 6,429	N/A	US\$ 6,429
	Citizens Bank NARI	-	"	-	US\$ 6,331	N/A	US\$ 6,331
	Suntrust Banks Inc.	-	"	-	US\$ 6,203	N/A	US\$ 6,203
	Welltower Inc.	-	"	-	US\$ 6,145	N/A	US\$ 6,145
	Wells Fargo & Company	-	"	-	US\$ 6,127	N/A	US\$ 6,127
	American Express Credit	-	"	-	US\$ 6,045	N/A	US\$ 6,045
	Berkshire Hathaway Fin.	-	"	-	US\$ 6,017	N/A	US\$ 6,017
	Skandinaviska Enskilda Banken AB	-	"	-	US\$ 6,001	N/A	US\$ 6,001
	Sysco Corporation	-	"	-	US\$ 5,978	N/A	US\$ 5,978
	Express Scripts Holding	-	"	-	US\$ 5,899	N/A	US\$ 5,899
	Toronto Dominion Bank	-	"	-	US\$ 5,806	N/A	US\$ 5,806
	Groupe Danone S.A.	-	"	-	US\$ 5,763	N/A	US\$ 5,763
	Shell International Fin.	-	"	-	US\$ 5,713	N/A	US\$ 5,713
	Toyota Motor Credit Corp.	-	"	-	US\$ 5,633	N/A	US\$ 5,633
	TIAA Asset Management Finance LLC	-	"	-	US\$ 5,617	N/A	US\$ 5,617
	ABN AMRO Bank N.V.	-	"	-	US\$ 5,572	N/A	US\$ 5,572
	Protective Life Global Funding	-	"	-	US\$ 5,552	N/A	US\$ 5,552
	Key Bank N.A.	-	"	-	US\$ 5,532	N/A	US\$ 5,532
	Mitsubishi UFJ Fin Grp.	-	"	-	US\$ 5,524	N/A	US\$ 5,524
	Cisco Systems Inc.	-	"	-	US\$ 5,511	N/A	US\$ 5,511
	Hyundai Capital America	-	"	-	US\$ 5,471	N/A	US\$ 5,471
	New York Life Global FDG	-	"	-	US\$ 5,445	N/A	US\$ 5,445
	Siemens Financieringsmat	-	"	-	US\$ 5,357	N/A	US\$ 5,357
	Fifth Third Bank	-	"	-	US\$ 5,341	N/A	US\$ 5,341
	Aviation Capital Group	-	"	-	US\$ 5,144	N/A	US\$ 5,144
	Semptra Energy	-	"	-	US\$ 5,144	N/A	US\$ 5,144
	Intl. Bank Recon. & Development	-	"	-	US\$ 5,137	N/A	US\$ 5,137
	HSBC Holdings PLC	-	"	-	US\$ 5,124	N/A	US\$ 5,124
	UBS AG Stamford CT	-	"	-	US\$ 5,017	N/A	US\$ 5,017
	Sumitomo Mitsui Trust Bank, Limited	-	"	-	US\$ 5,008	N/A	US\$ 5,008
	Macquarie Group Ltd.	-	"	-	US\$ 4,984	N/A	US\$ 4,984
	Reliance Stand Life II	-	"	-	US\$ 4,925	N/A	US\$ 4,925

(Continued)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2016			Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	
TSMC Global	Dominion Resources Inc.	-	Available-for-sale financial assets	-	US\$ 4,907	N/A	US\$ 4,907
	Walgreens Boots Alliance	-	"	-	US\$ 4,905	N/A	US\$ 4,905
	Swedbank AB	-	"	-	US\$ 4,839	N/A	US\$ 4,839
	Air Liquide Finance	-	"	-	US\$ 4,696	N/A	US\$ 4,696
	ING Bank N.V.	-	"	-	US\$ 4,692	N/A	US\$ 4,692
	Jackson Natl Life Global	-	"	-	US\$ 4,570	N/A	US\$ 4,570
	Mondelez International	-	"	-	US\$ 4,527	N/A	US\$ 4,527
	Mizuho Financial Group	-	"	-	US\$ 4,436	N/A	US\$ 4,436
	Enel Finance Intl N.V.	-	"	-	US\$ 4,402	N/A	US\$ 4,402
	CA, Inc.	-	"	-	US\$ 4,353	N/A	US\$ 4,353
	Deutsche Telekom International Fin.	-	"	-	US\$ 4,340	N/A	US\$ 4,340
	Oaktree Capital Management, L.P.	-	"	-	US\$ 4,316	N/A	US\$ 4,316
	Twenty-First Century Fox Inc.	-	"	-	US\$ 4,271	N/A	US\$ 4,271
	Lloyds Bank PLC	-	"	-	US\$ 4,220	N/A	US\$ 4,220
	Schlumberger Hldgs Corp.	-	"	-	US\$ 4,150	N/A	US\$ 4,150
	Nextera Energy Capital	-	"	-	US\$ 4,067	N/A	US\$ 4,067
	Keycorp Pty Ltd.	-	"	-	US\$ 4,043	N/A	US\$ 4,043
	Ameren Corp.	-	"	-	US\$ 4,017	N/A	US\$ 4,017
	Pepsico Inc.	-	"	-	US\$ 4,004	N/A	US\$ 4,004
	United Technologies Corporation	-	"	-	US\$ 3,995	N/A	US\$ 3,995
	Fortive Corporation	-	"	-	US\$ 3,968	N/A	US\$ 3,968
	State Street Corp.	-	"	-	US\$ 3,941	N/A	US\$ 3,941
	Wells Fargo Bank NA	-	"	-	US\$ 3,880	N/A	US\$ 3,880
	Autozone Inc.	-	"	-	US\$ 3,803	N/A	US\$ 3,803
	Husky Energy Inc.	-	"	-	US\$ 3,775	N/A	US\$ 3,775
	Sumitomo Mitsui Financial Group	-	"	-	US\$ 3,772	N/A	US\$ 3,772
	Fifth Third Bancorp	-	"	-	US\$ 3,771	N/A	US\$ 3,771
	Ryder System Inc.	-	"	-	US\$ 3,730	N/A	US\$ 3,730
	Anheuser Busch InBev Worldwide Inc.	-	"	-	US\$ 3,659	N/A	US\$ 3,659
	US Bank NA Cincinnati	-	"	-	US\$ 3,568	N/A	US\$ 3,568
	UBS Group Funding	-	"	-	US\$ 3,547	N/A	US\$ 3,547
	BAT Intl Finance PLC	-	"	-	US\$ 3,497	N/A	US\$ 3,497
	Credit Agricole London	-	"	-	US\$ 3,331	N/A	US\$ 3,331
	Lam Research Corp.	-	"	-	US\$ 3,218	N/A	US\$ 3,218
	Time Warner Inc.	-	"	-	US\$ 3,022	N/A	US\$ 3,022
	Canadian Imperial Bank	-	"	-	US\$ 3,002	N/A	US\$ 3,002
	BNP Paribas New York Branch	-	"	-	US\$ 3,000	N/A	US\$ 3,000
	Suncorp Metway Ltd.	-	"	-	US\$ 2,983	N/A	US\$ 2,983
	Cooperative Centrale	-	"	-	US\$ 2,974	N/A	US\$ 2,974
	Microsoft Corp.	-	"	-	US\$ 2,905	N/A	US\$ 2,905
	HSBC USA Inc.	-	"	-	US\$ 2,869	N/A	US\$ 2,869
	Rabobank Nederland NY	-	"	-	US\$ 2,855	N/A	US\$ 2,855
	Principal Life Global Funding II	-	"	-	US\$ 2,782	N/A	US\$ 2,782
	KIWI	-	"	-	US\$ 2,748	N/A	US\$ 2,748
	PartnerRe Finance B LLC	-	"	-	US\$ 2,709	N/A	US\$ 2,709
	Sprint Spectrum L.P.	-	"	-	US\$ 2,705	N/A	US\$ 2,705
	Apple Inc.	-	"	-	US\$ 2,607	N/A	US\$ 2,607
	Exelon Generation Co. LLC	-	"	-	US\$ 2,584	N/A	US\$ 2,584
	MetLife Global Funding I	-	"	-	US\$ 2,524	N/A	US\$ 2,524
	Unitedhealth Group Inc.	-	"	-	US\$ 2,500	N/A	US\$ 2,500

(Continued)



Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2016				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Toronto Domin Holding	-	Available-for-sale financial assets	-	US\$ 2,478	N/A	US\$ 2,478	
	Nordea Bank AB	-	"	-	US\$ 2,457	N/A	US\$ 2,457	
	Commonwealth Bank Australia NY	-	"	-	US\$ 2,404	N/A	US\$ 2,404	
	Marriott International, Inc.	-	"	-	US\$ 2,399	N/A	US\$ 2,399	
	Dow Chemical Co/The	-	"	-	US\$ 2,357	N/A	US\$ 2,357	
	Mckesson Corp.	-	"	-	US\$ 2,253	N/A	US\$ 2,253	
	Public Service Colorado	-	"	-	US\$ 2,166	N/A	US\$ 2,166	
	Allied World Assurance	-	"	-	US\$ 2,155	N/A	US\$ 2,155	
	Celgene Corp.	-	"	-	US\$ 2,115	N/A	US\$ 2,115	
	Stancorp Financial Group	-	"	-	US\$ 2,097	N/A	US\$ 2,097	
	Johnson Controls International PLC	-	"	-	US\$ 2,052	N/A	US\$ 2,052	
	The Bear Stearns Companies LLC	-	"	-	US\$ 2,011	N/A	US\$ 2,011	
	British Telecommunications PLC	-	"	-	US\$ 2,011	N/A	US\$ 2,011	
	Erste Bank der oesterreichischen Sparkassen AG	-	"	-	US\$ 2,000	N/A	US\$ 2,000	
	Norinchukin Bank	-	"	-	US\$ 2,000	N/A	US\$ 2,000	
	Nordic Investment Bank	-	"	-	US\$ 1,996	N/A	US\$ 1,996	
	FMS Wertmanagement	-	"	-	US\$ 1,995	N/A	US\$ 1,995	
	Asian Development Bank	-	"	-	US\$ 1,994	N/A	US\$ 1,994	
	Kells Funding LLC	-	"	-	US\$ 1,993	N/A	US\$ 1,993	
	Magellan Midstream Partners LP	-	"	-	US\$ 1,971	N/A	US\$ 1,971	
	Stryker Corp.	-	"	-	US\$ 1,951	N/A	US\$ 1,951	
	National Australia Bank/NY	-	"	-	US\$ 1,944	N/A	US\$ 1,944	
	Huntington National Bank	-	"	-	US\$ 1,911	N/A	US\$ 1,911	
	BPCE SA	-	"	-	US\$ 1,910	N/A	US\$ 1,910	
	Sumitomo Mitsui Banking	-	"	-	US\$ 1,898	N/A	US\$ 1,898	
	Royal Bank of Canada	-	"	-	US\$ 1,893	N/A	US\$ 1,893	
	Oncor Electric Delivery	-	"	-	US\$ 1,853	N/A	US\$ 1,853	
	WestRock RKT Company	-	"	-	US\$ 1,843	N/A	US\$ 1,843	
	Orange S.A.	-	"	-	US\$ 1,824	N/A	US\$ 1,824	
	Regency Centers, L.P.	-	"	-	US\$ 1,817	N/A	US\$ 1,817	
	LyondellBasell Industries N.V.	-	"	-	US\$ 1,796	N/A	US\$ 1,796	
	Aust. & NZ Banking Grp. NY	-	"	-	US\$ 1,794	N/A	US\$ 1,794	
	Southern Power Company	-	"	-	US\$ 1,785	N/A	US\$ 1,785	
	Dominion Gas Holdings, LLC	-	"	-	US\$ 1,764	N/A	US\$ 1,764	
	Cardinal Health Inc.	-	"	-	US\$ 1,754	N/A	US\$ 1,754	
	Kimco Realty Corp.	-	"	-	US\$ 1,739	N/A	US\$ 1,739	
	Amgen Inc.	-	"	-	US\$ 1,706	N/A	US\$ 1,706	
	Tyson Foods, Inc.	-	"	-	US\$ 1,704	N/A	US\$ 1,704	
	Enterprise Products Operating, LLC	-	"	-	US\$ 1,697	N/A	US\$ 1,697	
	Deutsche Bank AG, London	-	"	-	US\$ 1,644	N/A	US\$ 1,644	
	Pacific Gas & Electric	-	"	-	US\$ 1,633	N/A	US\$ 1,633	
	Trans Canada Pipelines	-	"	-	US\$ 1,566	N/A	US\$ 1,566	
	African Development Bank	-	"	-	US\$ 1,562	N/A	US\$ 1,562	
	Capital One Bank (USA), NA	-	"	-	US\$ 1,553	N/A	US\$ 1,553	
	Branch Banking & Trust	-	"	-	US\$ 1,532	N/A	US\$ 1,532	
	Simon Property Group LP	-	"	-	US\$ 1,507	N/A	US\$ 1,507	
	Halliburton Co.	-	"	-	US\$ 1,505	N/A	US\$ 1,505	
	Pfizer Inc.	-	"	-	US\$ 1,491	N/A	US\$ 1,491	
	Standard Chartered PLC	-	"	-	US\$ 1,487	N/A	US\$ 1,487	
	Suncor Energy, Inc.	-	"	-	US\$ 1,482	N/A	US\$ 1,482	

(Continued)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2016			Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	
TSMC Global	Westpac Banking Corp.	-	Available-for-sale financial assets	-	US\$ 1,481	N/A	US\$ 1,481
	Procter & Gamble Co/The	-	"	-	US\$ 1,472	N/A	US\$ 1,472
	HSBC Bank PLC	-	"	-	US\$ 1,468	N/A	US\$ 1,468
	Guardian Life Global Funding	-	"	-	US\$ 1,461	N/A	US\$ 1,461
	General Electric Co.	-	"	-	US\$ 1,417	N/A	US\$ 1,417
	Eastman Chemical Company	-	"	-	US\$ 1,407	N/A	US\$ 1,407
	ConocoPhillips	-	"	-	US\$ 1,396	N/A	US\$ 1,396
	Walt Disney Company/The	-	"	-	US\$ 1,387	N/A	US\$ 1,387
	PacifiCorp	-	"	-	US\$ 1,351	N/A	US\$ 1,351
	Deutsche Bank AG	-	"	-	US\$ 1,343	N/A	US\$ 1,343
	Biogen Inc.	-	"	-	US\$ 1,308	N/A	US\$ 1,308
	IBM Corp.	-	"	-	US\$ 1,307	N/A	US\$ 1,307
	Eaton Corp.	-	"	-	US\$ 1,289	N/A	US\$ 1,289
	Santander UK PLC	-	"	-	US\$ 1,287	N/A	US\$ 1,287
	Philip Morris Intl Inc.	-	"	-	US\$ 1,282	N/A	US\$ 1,282
	Equifax Inc.	-	"	-	US\$ 1,278	N/A	US\$ 1,278
	American Airlines 2013-2	-	"	-	US\$ 1,277	N/A	US\$ 1,277
	Visa Inc.	-	"	-	US\$ 1,256	N/A	US\$ 1,256
	Nissan Motor Acceptance	-	"	-	US\$ 1,254	N/A	US\$ 1,254
	Kroger Co.	-	"	-	US\$ 1,248	N/A	US\$ 1,248
	CSX Corp.	-	"	-	US\$ 1,178	N/A	US\$ 1,178
	Banque Fed Cred Mutuel	-	"	-	US\$ 1,160	N/A	US\$ 1,160
	ONEOK Partners LP	-	"	-	US\$ 1,142	N/A	US\$ 1,142
	Corning Inc.	-	"	-	US\$ 1,138	N/A	US\$ 1,138
	Public Service Enterprise Group Inc.	-	"	-	US\$ 1,123	N/A	US\$ 1,123
	ERP Operating LP	-	"	-	US\$ 1,119	N/A	US\$ 1,119
	Berkshire Hathaway Inc.	-	"	-	US\$ 1,103	N/A	US\$ 1,103
	Chevron Corp.	-	"	-	US\$ 1,098	N/A	US\$ 1,098
	Medtronic Inc.	-	"	-	US\$ 1,094	N/A	US\$ 1,094
	Westfarmers Ltd.	-	"	-	US\$ 1,088	N/A	US\$ 1,088
	Marsh & McLennan Cos Inc.	-	"	-	US\$ 1,080	N/A	US\$ 1,080
	International Paper Company	-	"	-	US\$ 1,071	N/A	US\$ 1,071
	BNP Paribas	-	"	-	US\$ 1,069	N/A	US\$ 1,069
	Cigna Corporation	-	"	-	US\$ 1,056	N/A	US\$ 1,056
	Comcast Corp.	-	"	-	US\$ 1,055	N/A	US\$ 1,055
	Merck & Co Inc.	-	"	-	US\$ 1,053	N/A	US\$ 1,053
	EOG Resources, Inc.	-	"	-	US\$ 1,051	N/A	US\$ 1,051
	Berkshire Hathaway Energy Co.	-	"	-	US\$ 1,048	N/A	US\$ 1,048
	Lincoln National Corp.	-	"	-	US\$ 1,027	N/A	US\$ 1,027
	Macy's Retail Holdings Inc.	-	"	-	US\$ 1,020	N/A	US\$ 1,020
	StatOil ASA	-	"	-	US\$ 1,019	N/A	US\$ 1,019
	Amazon.com Inc.	-	"	-	US\$ 1,017	N/A	US\$ 1,017
	Altera Corp.	-	"	-	US\$ 1,010	N/A	US\$ 1,010
	HP Enterprise Co.	-	"	-	US\$ 1,009	N/A	US\$ 1,009
	Home Depot Inc.	-	"	-	US\$ 1,009	N/A	US\$ 1,009
	Realty Income Corp.	-	"	-	US\$ 1,008	N/A	US\$ 1,008
	Manuf & Traders Trust Co.	-	"	-	US\$ 1,007	N/A	US\$ 1,007
	Carnival Corp.	-	"	-	US\$ 1,004	N/A	US\$ 1,004
	John Deere Capital Corp.	-	"	-	US\$ 1,004	N/A	US\$ 1,004
	Macquarie Bank Ltd.	-	"	-	US\$ 1,003	N/A	US\$ 1,003

(Continued)



Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2016				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	MUFG Union Bank, N.A.	-	Available-for-sale financial assets	-	US\$ 586	N/A	US\$ 586	
	AvalonBay Communities Inc.	-	"	-	US\$ 581	N/A	US\$ 581	
	Bunge Limited Finance Corp.	-	"	-	US\$ 573	N/A	US\$ 573	
	Boston Properties LP	-	"	-	US\$ 562	N/A	US\$ 562	
	Nordstrom Inc.	-	"	-	US\$ 553	N/A	US\$ 553	
	Caisse Centrale Desjardins	-	"	-	US\$ 549	N/A	US\$ 549	
	Digital Realty Trust, L.P.	-	"	-	US\$ 544	N/A	US\$ 544	
	McDonald's Corp.	-	"	-	US\$ 543	N/A	US\$ 543	
	Southwestern Electric Power Company	-	"	-	US\$ 540	N/A	US\$ 540	
	Prudential Financial Inc.	-	"	-	US\$ 537	N/A	US\$ 537	
	O'Reilly Automotive Inc.	-	"	-	US\$ 535	N/A	US\$ 535	
	TD Ameritrade Holding Corp.	-	"	-	US\$ 531	N/A	US\$ 531	
	American Express Co.	-	"	-	US\$ 526	N/A	US\$ 526	
	Burlington Northern Santa Fe Corp.	-	"	-	US\$ 507	N/A	US\$ 507	
	Inter-American Development Bank	-	"	-	US\$ 504	N/A	US\$ 504	
	PSEG Power LLC	-	"	-	US\$ 503	N/A	US\$ 503	
	CBS Corp.	-	"	-	US\$ 474	N/A	US\$ 474	
	Comerica Inc.	-	"	-	US\$ 464	N/A	US\$ 464	
	Honeywell International Inc.	-	"	-	US\$ 445	N/A	US\$ 445	
	Nationwide Building Society	-	"	-	US\$ 441	N/A	US\$ 441	
	Valero Energy Corp.	-	"	-	US\$ 429	N/A	US\$ 429	
	Blackstone Holdings Finance Co., LLC	-	"	-	US\$ 400	N/A	US\$ 400	
	Exxon Mobil Corporation	-	"	-	US\$ 399	N/A	US\$ 399	
	Conocophillips Company	-	"	-	US\$ 398	N/A	US\$ 398	
	Volkswagen Group of America, Inc.	-	"	-	US\$ 394	N/A	US\$ 394	
	First Niagara Financial Group, Inc.	-	"	-	US\$ 394	N/A	US\$ 394	
	Aon Corp.	-	"	-	US\$ 382	N/A	US\$ 382	
	Nationwide Financial Service, Inc.	-	"	-	US\$ 368	N/A	US\$ 368	
	American Honda Finance	-	"	-	US\$ 353	N/A	US\$ 353	
	Wm. Wrigley Jr. Co.	-	"	-	US\$ 329	N/A	US\$ 329	
	MethLife Inc.	-	"	-	US\$ 315	N/A	US\$ 315	
	Pearson Doi Fin Two PLC	-	"	-	US\$ 292	N/A	US\$ 292	
	Barclays Bank PLC	-	"	-	US\$ 292	N/A	US\$ 292	
	BAE Systems Holdings, Inc.	-	"	-	US\$ 278	N/A	US\$ 278	
	EMD Finance LLC	-	"	-	US\$ 268	N/A	US\$ 268	
	Mattel Inc.	-	"	-	US\$ 262	N/A	US\$ 262	
	U.S. Bancorp	-	"	-	US\$ 252	N/A	US\$ 252	
	Nomura Holdings Inc.	-	"	-	US\$ 247	N/A	US\$ 247	
	Kansas City Power & Light Company	-	"	-	US\$ 246	N/A	US\$ 246	
	Bank of Nova Scotia	-	"	-	US\$ 245	N/A	US\$ 245	
	Aon PLC	-	"	-	US\$ 238	N/A	US\$ 238	
	Protective Life Corporation	-	"	-	US\$ 235	N/A	US\$ 235	
	WestRock MWV, LLC	-	"	-	US\$ 223	N/A	US\$ 223	
	Rolls Royce PLC	-	"	-	US\$ 212	N/A	US\$ 212	
	Assurant, Inc.	-	"	-	US\$ 196	N/A	US\$ 196	
	Woolworths Limited	-	"	-	US\$ 153,147	N/A	US\$ 154,710	
	JPMorgan Chase & Co.	-	Held-to-maturity financial assets	-	US\$ 150,007	N/A	US\$ 150,321	
	Wells Fargo & Company	-	"	-	US\$ 100,000	N/A	US\$ 100,959	
	Goldman Sachs Group, Inc.	-	"	-	US\$ 100,000	N/A	US\$ 100,743	
	Westpac Banking Corp.	-	"	-	US\$ 100,000	N/A	US\$ 100,743	

(Continued)





Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2016				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Citigroup Commercial Mortgage Trust	-	Available-for-sale financial assets	-	US\$ 4,207	N/A	US\$ 4,207	
	Morgan Stanley Capital I Trust	-	"	-	US\$ 4,114	N/A	US\$ 4,114	
	Mercedes Benz Auto Receivables Trust	-	"	-	US\$ 3,699	N/A	US\$ 3,699	
	BMW Floorplan Master Owner Trust	-	"	-	US\$ 2,437	N/A	US\$ 2,437	
	Ford Credit Auto Lease Trust	-	"	-	US\$ 2,174	N/A	US\$ 2,174	
	Nissan Master Owner Trust Receivables Trust	-	"	-	US\$ 2,003	N/A	US\$ 2,003	
	Carnax Auto Owner Trust	-	"	-	US\$ 2,000	N/A	US\$ 2,000	
	Golden Credit Card Trust	-	"	-	US\$ 1,801	N/A	US\$ 1,801	
	Wheels SPV LLC	-	"	-	US\$ 1,690	N/A	US\$ 1,690	
	Wells Fargo Commercial Mortgage Trust	-	"	-	US\$ 1,295	N/A	US\$ 1,295	
	CFCRE Commercial Mortgage Trust	-	"	-	US\$ 1,083	N/A	US\$ 1,083	
	Enterprise Fleet Financing LLC	-	"	-	US\$ 798	N/A	US\$ 798	
VTAF III	Structure product Bank of Tokyo-Mitsubishi UFJ	-	Held-to-maturity financial assets	-	US\$ 50,000	N/A	US\$ 49,993	
	Fund PrimaVern Capital Fund II L.P.	-	Financial assets carried at cost	-	US\$ 23,784	4	US\$ 23,784	
VTAF II	Common stock LiquidLeds Lighting Corp.	-	Financial assets carried at cost	1,600	US\$ 800	11	US\$ 800	
	Xeno Corporation	-	"	435	US\$ 453	3	US\$ 453	
	Action Wireless Broadband Corp.	-	"	2,249	US\$ 315	6	US\$ 315	
	Preferred stock GTBF, Inc. Neocomx, Inc.	-	Financial assets carried at cost	1,154 4,147	US\$ 1,500 US\$ 170	-	US\$ 1,500 US\$ 170	
ISDF	Common stock RichWave Technology Corp. Impinj, Inc.	-	Available-for-sale financial assets	1,334 62	US\$ 2,378 US\$ 2,189	2	US\$ 2,378 US\$ 2,189	
	Sentelic	-	Financial assets carried at cost	1,806	US\$ 2,607	8	US\$ 2,607	
	5V Technologies, Inc. Aether Systems, Inc.	-	"	963 3,100	US\$ 2,168 US\$ 339	2 30	US\$ 2,168 US\$ 339	
	Preferred stock Aquantia	-	Financial assets carried at cost	4,643	US\$ 4,441	2	US\$ 4,441	
ISDF II	Preferred stock Sonics, Inc.	-	Financial assets carried at cost	230	-	3	-	
	Common stock Alchip Technologies Limited Sonics, Inc.	-	Available-for-sale financial assets Financial assets carried at cost	6,581 278	US\$ 6,387 -	11 4	US\$ 6,387 -	
Growth Fund	Preferred stock Sonics, Inc.	-	Financial assets carried at cost	264	-	4	-	
	Common stock Innovium, Inc.	-	Financial assets carried at cost	221	US\$ 370	-	US\$ 370	
	Preferred stock Innovium, Inc.	-	Financial assets carried at cost	230	US\$ 384	-	US\$ 384	

(Concluded)

## Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

MARKETABLE SECURITIES ACQUIRED AND DISPOSED OF AT COSTS OR PRICES OF AT LEAST NT\$300 MILLION OR 20% OF THE PAID-IN CAPITAL FOR THE YEAR ENDED DECEMBER 31, 2016  
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Company Name	Marketable Securities Type and Name	Financial Statement Account	Counter-party	Nature of Relationship	Beginning Balance		Acquisition		Disposal		Ending Balance (Note 1)		
					Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount	
TSMC	Bank debentures	Held-to-maturity financial assets	-	-	-	\$ 3,305,475	-	\$	\$ 3,300,000	-	-	\$	
	HSBC Bank (Taiwan) Limited												
	Corporate bond	Held-to-maturity financial assets	-	-	-	1,543,723	-	1,513,743	1,075,000	-	-	1,967,303	
	CPC Corporation, Taiwan												
	Hon Hai Precision Ind. Co., Ltd.	"	-	-	-	1,003,858	-	-	600,000	-	-	400,250	
	Taiwan Power Company	"	-	-	-	1,207,601	-	-	1,000,000	-	-	200,848	
	Nan Ya Plastics Corporation	"	-	-	-	-	302,139	-	150,000	-	-	150,742	
	Structure product												
	Hua Nan Commercial Bank	Held-to-maturity financial assets	-	-	-	2,000,000	-	-	2,000,000	-	-	-	
	Cathay United Bank	"	-	-	-	1,000,000	-	-	1,000,000	-	-	-	
Commercial paper													
Taiwan Power Company	Held-to-maturity financial assets	-	-	-	-	945	9,426,884	-	800,000	-	865	8,628,176	
Stock													
TSMC Global	Investments accounted for using equity method	-	-	Subsidiary	5	203,425,723	2	64,451,983	-	-	-	7	265,634,729
TSMC Nanjing	"	-	-	Subsidiary	-	-	-	6,435,200	-	-	-	-	6,331,094
VisEra Tech	"	-	VisEra Holding	Subsidiary	-	-	253,120	5,005,171	-	-	253,120	-	5,234,883
Xintec	"	-	VisEra Holding	Associate	92,778	2,209,785	18,504	678,348	-	-	-	111,282	2,599,807
								Note 2					
TSMC Global	Corporate bond	Available-for-sale financial assets	-	-	-	US\$ 6,993	-	US\$ 25,862	US\$ 4,624	US\$ 4,532	US\$ 92	US\$ 27,973	
	Bank of America Corp.												
	JP Morgan Chase & Co.	"	-	-	-	US\$ 4,971	-	US\$ 28,534	US\$ 11,121	US\$ 10,999	US\$ 122	US\$ 22,330	
	Verizon Communications	"	-	-	-	US\$ 4,994	-	US\$ 12,385	-	-	-	US\$ 17,059	
	Citigroup Inc.	"	-	-	-	US\$ 2,986	-	US\$ 13,979	-	-	-	US\$ 16,819	
	Abbvie Inc.	"	-	-	-	US\$ 3,882	-	US\$ 14,338	US\$ 251	US\$ 251	-	US\$ 13,850	
	AT&T Inc.	"	-	-	-	US\$ 1,000	-	US\$ 10,044	US\$ 384	US\$ 390	(6)	US\$ 13,332	
	Gilead Sciences Inc.	"	-	-	-	-	-	US\$ 11,222	-	-	-	US\$ 11,850	
	Aetna Inc.	"	-	-	-	-	-	US\$ 1,687	-	-	-	US\$ 11,618	
	Morgan Stanley	"	-	-	-	US\$ 1,005	-	US\$ 10,359	-	-	-	US\$ 11,237	
	Oracle Corp.	"	-	-	-	US\$ 2,428	-	US\$ 9,572	US\$ 1,447	US\$ 1,426	US\$ 21	US\$ 10,405	
	Svenska Handelsbanken AB	"	-	-	-	-	-	US\$ 9,922	-	-	-	US\$ 9,837	
	Teva Pharmaceuticals Netherlands	"	-	-	-	-	-	US\$ 14,629	US\$ 5,856	US\$ 5,987	US\$ (131)	US\$ 8,467	

(Continued)

Company Name	Marketable Securities Type and Name	Financial Statement Account	Counter-party	Nature of Relationship	Beginning Balance		Acquisition		Disposal		Ending Balance (Note 1)		
					Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount	Carrying Value	Gain/Loss on Disposal	Shares/Units (In Thousands)
TSMC Global	BMW US Capital LLC	Available-for-sale financial assets	-	-	-	US\$ 11,211	-	US\$ 3,990	US\$ 3,990	-	US\$ -	-	US\$ 7,180
	Wells Fargo & Company	"	-	-	-	US\$ 9,706	-	US\$ 6,008	US\$ 5,967	-	US\$ 41	-	US\$ 6,127
	Sysco Corporation	"	-	-	-	US\$ 13,622	-	US\$ 7,605	US\$ 7,496	-	US\$ 109	-	US\$ 5,978
	Shell International Fin.	"	-	-	-	US\$ 9,752	-	US\$ 5,212	US\$ 5,234	-	US\$ (22)	-	US\$ 5,713
	Cisco Systems Inc.	"	-	-	-	US\$ 13,545	-	US\$ 8,079	US\$ 8,007	-	US\$ 72	-	US\$ 5,511
	US Bank NA Cincinnati	"	-	-	-	US\$ 12,590	-	US\$ 9,018	US\$ 8,985	-	US\$ 33	-	US\$ 3,568
	JPMorgan Chase & Co.	Held-to-maturity financial assets	-	-	-	US\$ 143,533	-	-	-	-	US\$ -	-	US\$ 153,147
	Wells Fargo & Company	"	-	-	-	US\$ 150,008	-	-	-	-	US\$ -	-	US\$ 150,007
	Westpac Banking Corp.	"	-	-	-	US\$ 100,000	-	-	-	-	US\$ -	-	US\$ 100,000
	Goldman Sachs Group, Inc.	"	-	-	-	US\$ 100,000	-	-	-	-	US\$ -	-	US\$ 100,000
	Commonwealth Bank of Australia	"	-	-	-	US\$ 50,000	-	-	-	-	US\$ -	-	US\$ 50,000
	National Australia Bank	"	-	-	-	US\$ 50,000	-	-	-	-	US\$ -	-	US\$ 50,000
	Bank of Nova Scotia	"	-	-	-	US\$ 49,978	-	-	-	-	US\$ -	-	US\$ 49,982
	Government bond	"	-	-	-	US\$ 285,949	-	US\$ 110,552	US\$ 111,205	-	US\$ (653)	-	US\$ 195,285
	US Treasury N/B	Available-for-sale financial assets	-	-	-	US\$ 26,702	-	-	-	-	US\$ -	-	US\$ 30,756
	US Treasury Floating Rate Note	"	-	-	-	US\$ 104,729	-	US\$ 74,021	US\$ 73,990	-	US\$ 31	-	US\$ 19,349
	Treasury Inflation-Indexed N/B	"	-	-	-	US\$ 19,492	-	US\$ 12,938	US\$ 12,963	-	US\$ (25)	-	US\$ 13,842
	US Treasury N/B	"	-	-	-	US\$ 27,040	-	US\$ 14,699	US\$ 14,698	-	US\$ 1	-	US\$ -
	WT Treasury Securities	"	-	-	-	US\$ 14,698	-	US\$ 10,494	US\$ 10,486	-	US\$ 8	-	US\$ -
	Treasury Bill	"	-	-	-	US\$ 10,486	-	-	-	-	US\$ -	-	US\$ -
	Agency bond	"	-	-	-	US\$ 16,185	-	US\$ 609	US\$ 698	-	US\$ (89)	-	US\$ 15,322
	Fed Hm Ln Pk Pool G60594	Available-for-sale financial assets	-	-	-	US\$ 23,724	-	US\$ 9,288	US\$ 9,351	-	US\$ (63)	-	US\$ 14,067
	Fmma Pool AL9128	"	-	-	-	US\$ 9,855	-	US\$ 2,925	US\$ 3,333	-	US\$ (408)	-	US\$ 12,533
	Fmma Pool AL7191	"	-	-	-	US\$ 5,864	-	US\$ 516	US\$ 584	-	US\$ (68)	-	US\$ 9,462
	Fmma Pool AL8430	"	-	-	-	US\$ 10,171	-	US\$ 2,292	US\$ 2,619	-	US\$ (327)	-	US\$ 9,281
	Fmma Pool 888577	"	-	-	-	US\$ 11,995	-	US\$ 425	US\$ 447	-	US\$ (22)	-	US\$ 9,177
	Fed Hm Ln Pk Pool G18605	"	-	-	-	US\$ 9,855	-	US\$ 439	US\$ 478	-	US\$ (39)	-	US\$ 9,173
	Fed Hm Ln Pk Pool G60081	"	-	-	-	US\$ 9,954	-	US\$ 1,309	US\$ 1,366	-	US\$ (57)	-	US\$ 8,457
	Fmma Pool AV5062	"	-	-	-	US\$ 9,975	-	US\$ 9,351	US\$ 9,385	-	US\$ (34)	-	US\$ -
	Fed Hm Ln Pk Pool G60344	"	-	-	-	US\$ 9,385	-	US\$ 20,007	US\$ 19,967	-	US\$ 40	-	US\$ -
	Fmma Pool AS8074	"	-	-	-	US\$ 19,967	-	US\$ 12,504	US\$ 12,496	-	US\$ 8	-	US\$ -
	Fed Home Ln Discount Nt.	"	-	-	-	US\$ 12,496	-	US\$ 16,006	US\$ 15,978	-	US\$ 28	-	US\$ -
	Fmma Tba 15 Yr 2.5	"	-	-	-	US\$ 3,964	-	-	-	-	US\$ -	-	US\$ -
	Corporate issued asset-backed securities	"	-	-	-	US\$ 32,785	-	US\$ 1,999	US\$ 1,996	-	US\$ 3	-	US\$ 39,626
	Capital One Multi Asset Execution Trust	Available-for-sale financial assets	-	-	-	US\$ 8,961	-	-	-	-	US\$ -	-	US\$ 31,276
	Chase Issuance Trust	"	-	-	-	US\$ 15,507	-	US\$ 5,744	US\$ 5,753	-	US\$ (9)	-	US\$ 23,076
	Discover Card Execution Note Trust	"	-	-	-	US\$ 12,126	-	US\$ 6,104	US\$ 6,152	-	US\$ (48)	-	US\$ -
	Citibank Credit Card Issuance Trust	"	-	-	-	US\$ 9,756	-	US\$ 6,850	US\$ 6,843	-	US\$ 7	-	US\$ 22,585
	Bank of America Credit Card Trust	"	-	-	-	US\$ 4,433	-	-	-	-	US\$ -	-	US\$ 17,465
	Ford Credit Floorplan Master Owner Trust	"	-	-	-	US\$ 5,922	-	US\$ 3,459	US\$ 3,460	-	US\$ (1)	-	US\$ 11,944

(Continued)



Company Name	Marketable Securities Type and Name	Financial Statement Account	Counter-party	Nature of Relationship	Beginning Balance		Acquisition		Disposal		Ending Balance (Note 1)	
					Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount	Gain/Loss on Disposal	Carrying Value
TSMC Global	Structure product Bank of Tokyo-Mitsubishi UFJ	Heid-to-maturity financial assets	-	-	-	US\$ -	-	US\$ 50,000	-	US\$ -	-	US\$ 50,000
	Fund Primavera Capital Fund II L.P.	Financial assets carried at cost	-	-	-	US\$ 12,017	-	US\$ 11,767	-	-	-	US\$ 23,784
	Money market fund Goldman Sachs US\$ Liquid Reserves Fund	Available-for-sale financial assets	-	-	199,144	US\$ 199,144	199,144	US\$ 199,144	US\$ 199,144	-	-	-

Note 1: The ending balance includes the amortization of premium/discount on bonds investments, share of profits/losses of investees and other related adjustment.

Note 2: The Company restructured the organizational structure to simplify investment structure. Therefore, the acquisition amount was the carrying value of VisEra Holding's investment in VisEra Tech and Xintec, respectively.

(Concluded)

## Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

ACQUISITION OF INDIVIDUAL REAL ESTATE PROPERTIES AT COSTS OF AT LEAST NT\$300 MILLION OR 20% OF THE PAID-IN CAPITAL FOR THE YEAR ENDED DECEMBER 31, 2016  
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Company Name	Types of Property	Transaction Date	Transaction Amount (Foreign Currencies in Thousands)	Payment Term	Counter-party	Nature of Relationships	Prior Transaction of Related Counter-party				Price Reference	Purpose of Acquisition	Other Terms
							Owner	Relationships	Transfer Date	Amount			
TSMC	Fab	April 15, 2015 to February 17, 2016	\$ 362,111	Monthly settlement by the construction progress and acceptance	Environetics Design Group Co., Ltd.	-	N/A	N/A	N/A	Bidding, price comparison and price negotiation	Manufacturing purpose	None	
	Fab	September 17, 2015 to January 25, 2016	3,201,800	Monthly settlement by the construction progress and acceptance	DA CIN Construction Co., Ltd.	-	N/A	N/A	N/A	Bidding, price comparison and price negotiation	Manufacturing purpose	None	
	Fab	November 20, 2015 to October 26, 2016	329,010	Monthly settlement by the construction progress and acceptance	TASA Construction Corporation	-	N/A	N/A	N/A	Bidding, price comparison and price negotiation	Manufacturing purpose	None	
	Fab	December 10, 2015 to April 11, 2016	3,167,768	Monthly settlement by the construction progress and acceptance	Fu Tsu Construction Co., Ltd.	-	N/A	N/A	N/A	Bidding, price comparison and price negotiation	Manufacturing purpose	None	
	Fab	December 31, 2015 to January 04, 2016	1,250,000	Monthly settlement by the construction progress and acceptance	China Steel Structure Co., Ltd.	-	N/A	N/A	N/A	Bidding, price comparison and price negotiation	Manufacturing purpose	None	
	Fab	January 22, 2016 to January 25, 2016	750,000	Monthly settlement by the construction progress and acceptance	KEDGE Construction Co., Ltd.	-	N/A	N/A	N/A	Bidding, price comparison and price negotiation	Manufacturing purpose	None	
	TSMC Nanjing	Land use right	June 16, 2016	RMB 160,521	100% payment	Nanjing Municipal Bureau of Land and Resources	-	N/A	N/A	N/A	Bidding	Manufacturing purpose	None
		Fab	June 30, 2016	RMB 899,997	Monthly settlement by the construction progress and acceptance	China Construction First Division Group Construction & Development Co., Ltd.	-	N/A	N/A	N/A	Bidding, price comparison and price negotiation	Manufacturing purpose	None
Fab	October 17, 2016	RMB 408,980	Monthly settlement by the construction progress and acceptance	Shanghai Baoye Group Co., Ltd.	-	N/A	N/A	N/A	N/A	Bidding, price comparison and price negotiation	Manufacturing purpose	None	

## Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

TOTAL PURCHASES FROM OR SALES TO RELATED PARTIES OF AT LEAST NT\$100 MILLION OR 20% OF THE PAID-IN CAPITAL FOR THE YEAR ENDED DECEMBER 31, 2016  
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Company Name	Related Party	Nature of Relationships	Transaction Details			Abnormal Transaction		Notes/Accounts Payable or Receivable		Note
			Purchases/ Sales	Amount (Foreign Currencies in Thousands)	% to Total	Payment Terms	Unit Price	Payment Terms	Ending Balance (Foreign Currencies in Thousands)	
TSMC	TSMC North America	Subsidiary	Sales	\$ 633,917,888	65	Net 30 days from invoice date (Note)	-	-	\$ 85,874,678	67
	GUC	Associate	Sales	5,008,684	1	Net 30 days from the end of the month of when invoice is issued	-	-	931,787	1
	TSMC China	Subsidiary	Purchases	19,256,773	27	Net 30 days from the end of the month of when invoice is issued	-	-	(1,775,774)	6
	WaferTech	Indirect subsidiary	Purchases	8,531,562	12	Net 30 days from the end of the month of when invoice is issued	-	-	(1,303,795)	4
	VIS	Associate	Purchases	6,732,298	10	Net 30 days from the end of the month of when invoice is issued	-	-	(587,407)	2
	SSMC	Associate	Purchases	3,375,422	5	Net 30 days from the end of the month of when invoice is issued	-	-	(505,655)	2
	TSMC North America	GUC	Associate of TSMC	Sales	842,301 (US\$ 26,098)	-	Net 30 days from invoice date	-	-	37,349 (US\$ 1,160)

Note: The tenor is 30 days from TSMC's invoice date or determined by the payment terms granted to its clients by TSMC North America.

## Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

RECEIVABLES FROM RELATED PARTIES AMOUNTING TO AT LEAST NT\$100 MILLION OR 20% OF THE PAID-IN CAPITAL  
DECEMBER 31, 2016

(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Company Name	Related Party	Nature of Relationships	Ending Balance (Foreign Currencies in Thousands)	Turnover Days (Note 1)	Amount	Overdue		Allowance for Bad Debts
						Action Taken	Amounts Received in Subsequent Period	
TSMC	TSMC North America GUC	Subsidiary Associate	\$ 86,675,335 931,787	41 52	\$ 5,767,087 593,265	- -	\$ 14,527,760 593,265	- -
TSMC North America	TSMC	Parent company	200,701 (US\$ 6,233)	Note 2	-	-	-	-
TSMC China	TSMC	Parent company	1,775,774 (RMB 383,265)	31	-	-	-	-
	TSMC Nanjing	The same parent company	4,190,708 (RMB 904,476)	Note 2	-	-	-	-
TSMC Technology	TSMC	Parent company	209,112 (US\$ 6,494)	Note 2	-	-	-	-
WaferTech	TSMC	The ultimate parent of the Company	1,303,795 (US\$ 40,492)	42	-	-	-	-
	TSMC Development	Parent company	172,015 (US\$ 5,342)	Note 2	-	-	-	-

Note 1: The calculation of turnover days excludes other receivables from related parties.

Note 2: The ending balance is primarily consisted of other receivables, which is not applicable for the calculation of turnover days.



## Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

INTERCOMPANY RELATIONSHIPS AND SIGNIFICANT INTERCOMPANY TRANSACTIONS  
FOR THE YEAR ENDED DECEMBER 31, 2016  
(Amounts in Thousands of New Taiwan Dollars)

No.	Company Name	Counter Party	Nature of Relationship (Note 1)	Intercompany Transactions			Percentage of Consolidated Net Revenue or Total Assets
				Financial Statements Item	Amount	Terms (Note 2)	
0	TSMC	TSMC North America	1	Net revenue from sale of goods	\$ 633,917,888	-	67%
				Receivables from related parties	85,874,678	-	5%
				Other receivables from related parties	800,657	-	-
				Payables to related parties	200,701	-	-
		TSMC Japan	1	Marketing expenses - commission	262,274	-	-
		TSMC Europe	1	Marketing expenses - commission	451,801	-	-
		TSMC China	1	Purchases	19,256,773	-	2%
				Marketing expenses - commission	133,704	-	-
				Payables to related parties	1,775,774	-	-
		TSMC Canada	1	Research and development expenses	241,163	-	-
		TSMC Technology	1	Research and development expenses	1,870,324	-	-
		WaferTech	1	Payables to related parties	209,112	-	-
				Purchases	8,531,562	-	1%
1	TSMC China	TSMC Nanjing	3	Payables to related parties	1,303,795	-	-
2	TSMC Development	WaferTech	3	Other receivables from related parties	4,190,708	-	-
				Other payables from related parties	172,015	-	-

Note 1: No. 1 represents the transactions from parent company to subsidiary.

No. 3 represents the transactions between subsidiaries.

Note 2: The sales prices and payment terms of intercompany sales are not significantly different from those to third parties. For other intercompany transactions, prices and terms are determined in accordance with mutual agreements.

## Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

NAMES, LOCATIONS, AND RELATED INFORMATION OF INVESTEEES OVER WHICH THE COMPANY EXERCISES SIGNIFICANT INFLUENCE (EXCLUDING INFORMATION ON INVESTMENT IN MAINLAND CHINA)  
FOR THE YEAR ENDED DECEMBER 31, 2016  
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Investor Company	Investee Company	Location	Main Businesses and Products	Original Investment Amount		Balance as of December 31, 2016		Net Income (Losses) of the Investee (Foreign Currencies in Thousands)	Share of Profits/Losses of Investee (Note 1) (Foreign Currencies in Thousands)	Note
				December 31, 2016 (Foreign Currencies in Thousands)	December 31, 2015 (Foreign Currencies in Thousands)	Shares (In Thousands)	Percentage of Ownership			
TSMC	TSMC Global	Tortola, British Virgin Islands	Investment activities	\$ 232,207,219	\$ 167,755,236	7	100	\$ 2,818,659	\$ 2,818,659	Subsidiary
	TSMC Partners	Tortola, British Virgin Islands	Investing in companies involved in the design, manufacture, and other related businesses in the semiconductor industry	31,456,130	31,456,130	988,268	100	2,145,629	2,145,629	Subsidiary
	VIS	Hsin-Chu, Taiwan	Research, design, development, manufacture, packaging, testing and sale of memory integrated circuits, LSI, VLSI and related parts	10,180,677	10,180,677	464,223	28	5,537,925	1,563,446	Associate
	SSMC	Singapore	Fabrication and supply of integrated circuits	5,120,028	5,120,028	314	39	4,921,406	1,909,013	Associate
	VisEra Tech	Hsin-Chu, Taiwan	Engaged in manufacturing electronic spare parts and in researching, developing, designing, manufacturing, selling, packaging and testing of color filter	5,005,171	-	253,120	87	661,562	229,712	Subsidiary
	TSMC North America	San Jose, California, U.S.A	Selling and marketing of integrated circuits and semiconductor devices	333,718	333,718	11,000	100	195,672	195,672	Subsidiary
	Xintec	Taoyuan, Taiwan	Wafer level chip size packaging service	1,988,317	1,309,969	111,282	41	2,599,807	(242,999)	Associate
	GUC	Hsin-Chu, Taiwan	Researching, developing, manufacturing, testing and marketing of integrated circuits	386,568	386,568	46,688	35	551,082	192,426	Associate
	VTAF II	Cayman Islands	Investing in new start-up technology companies	608,562	608,562	-	98	467,171	(85,702)	Subsidiary
	TSMC Europe	Amsterdam, the Netherlands	Marketing and engineering supporting activities	15,749	15,749	-	100	353,695	40,471	Subsidiary
	VTAF III	Cayman Islands	Investing in new start-up technology companies	1,355,417	1,499,452	-	98	219,350	(12,810)	Subsidiary
	TSMC Japan	Yokohama, Japan	Marketing activities	83,760	83,760	6	100	132,999	3,861	Subsidiary
	TSMC Korea	Seoul, Korea	Customer service and technical supporting activities	13,656	13,656	80	100	35,706	2,074	Subsidiary
TSMC Partners	TSMC Solar Europe GmbH	Hamburg, Germany	Selling of solar related products and providing customer service	25,266	25,266	1	100	(7,810)	(7,810)	Subsidiary
	VTA Holdings	Delaware, U.S.A	Investing in new start-up technology companies	-	844,775	-	7	-	-	Subsidiary
	Emerging Alliance	Cayman Islands	Investing in new start-up technology companies	-	394,674	-	-	(313)	(311)	Subsidiary
	Chi Chem	Taipei, Taiwan	Investment activities	Note 4	5,221,931	Note 4	Note 4	1,612	1,612	Note 4
	Motech	New Taipei, Taiwan	Manufacturing and sales of solar cells, crystalline silicon solar cell, and test and measurement instruments and design and construction of solar power systems	Note 3	-	Note 3	Note 3	Note 3	93,030	Note 3
	TSMC Development	Delaware, U.S.A	Investment activities	18,898,843	18,898,843	-	100	1,606,936	Note 2	Subsidiary
	TSMC Technology	Delaware, U.S.A	Engineering support activities	(US\$ 586,939)	(US\$ 586,939)	-	100	(US\$ 49,790)	Note 2	Subsidiary
	ISDF II	Cayman Islands	Investing in new start-up technology companies	(US\$ 459,867)	(US\$ 459,867)	-	97	(US\$ 9,719)	Note 2	Subsidiary
	TSMC Canada	Ontario, Canada	Engineering support activities	(US\$ 14,282)	(US\$ 14,282)	9,299	100	(US\$ 301)	Note 2	Subsidiary
	ISDF	Cayman Islands	Investing in new start-up technology companies	(US\$ 167,236)	(US\$ 299,419)	2,300	97	(US\$ 91)	Note 2	Subsidiary
				(US\$ 5,194)	(US\$ 9,299)	583	97	(US\$ 461)	Note 2	Subsidiary
				(US\$ 74,058)	(US\$ 74,058)			(US\$ 14,870)	Note 2	Subsidiary
				(US\$ 2,300)	(US\$ 2,300)			(US\$ 461)	Note 2	Subsidiary
			(US\$ 15,301)	(US\$ 18,772)			(US\$ 69)	Note 2	Subsidiary	
			(US\$ 475)	(US\$ 583)			(US\$ 15)	Note 2	Subsidiary	

(Continued)

Investor Company	Investee Company	Location	Main Businesses and Products	Original Investment Amount		Balance as of December 31, 2016			Net Income (Losses) of the Investee (Foreign Currencies in Thousands)	Share of Profits/Losses of Investee (Note 1) (Foreign Currencies in Thousands)	Note
				December 31, 2016 (Foreign Currencies in Thousands)	December 31, 2015 (Foreign Currencies in Thousands)	Shares (In Thousands)	Percentage of Ownership	Carrying Value (Foreign Currencies in Thousands)			
TSMC Partners	VisEra Holding	Cayman Islands	Investing in companies involved in the design, manufacturing, and other related businesses in the semiconductor industry	Note 5	\$ 4,868,630 (US\$ 151,204)	Note 5	Note 5	\$ 351,135 (US\$ 10,880)	Note 2	Note 5	
VTAF III	Growth Fund	Cayman Islands	Investing in new start-up technology companies	\$ 47,067 (US\$ 1,462)	47,067 (US\$ 1,462)	-	100	\$ 29,486 (US\$ 916)	Note 2	Subsidiary	
	Mutual-Pak	New Taipei, Taiwan	Manufacturing of electronic parts, wholesaling and retailing of electronic materials, and researching, developing and testing of RFID	167,843 (US\$ 5,213)	167,843 (US\$ 5,213)	15,643	58	21,725 (US\$ 675)	Note 2	Subsidiary	
VTAF II	VTA Holdings	Delaware, U.S.A	Investing in new start-up technology companies	-	-	-	62	-	Note 2	Subsidiary	
	VTA Holdings	Delaware, U.S.A	Investing in new start-up technology companies	-	-	-	31	-	Note 2	Subsidiary	
TSMC Development	WaferTech	Washington, U.S.A	Manufacturing, selling, testing and computer-aided designing of integrated circuits and other semiconductor devices	-	-	293,637	100	5,785,335 (US\$ 179,674)	Note 2	Subsidiary	
	VisEra Tech	Hsin-Chu, Taiwan	Engaged in manufacturing electronic spare parts and in researching, developing, designing, manufacturing, selling, packaging and testing of color filter	Note 5	3,028,916 (US\$ 94,069)	Note 5	Note 5	661,562 (US\$ 20,498)	Note 2	Note 5	
VisEra Holding	Xintec	Taoyuan, Taiwan	Wafer level chip size packaging service	Note 5	195,864 (US\$ 6,083)	Note 5	Note 5	(636,819) (US\$ (19,732))	Note 2	Note 5	

Note 1: The share of profits/losses of investee includes the effect of unrealized gross profit on intercompany transactions.

Note 2: The share of profits/losses of the investee company is not reflected herein as such amount is already included in the share of profits/losses of the investor company.

Note 3: The Company has no longer served as Motech's board of director starting June 2016. As a result, the Company exercises no significant influence over Motech. Therefore, Motech is no longer accounted for using the equity method. Further, such investment was reclassified to available-for-sale financial assets.

Note 4: Chi Cheng was incorporated into TSMC in December 2016.

Note 5: In October 2016, VisEra Holding was incorporated into TSMC Partners, the subsidiary of TSMC.

(Concluded)

## Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries

INFORMATION ON INVESTMENT IN MAINLAND CHINA  
FOR TWELVE MONTHS ENDED DECEMBER 31, 2016

(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Investee Company	Main Businesses and Products	Total Amount of Paid-in Capital (RMB in Thousands)	Method of Investment	Accumulated Outflow of Investment from Taiwan as of January 1, 2016 (US\$ in Thousands)	Investment Flows		Accumulated Outflow of Investment from Taiwan as of December 31, 2016 (US\$ in Thousands)	Net Income (Losses) of the Investee Company	Percentage of Ownership	Share of Profits/Losses	Carrying Amount as of December 31, 2016	Accumulated Inward Remittance of Earnings as of December 31, 2016
					Outflow (US\$ in Thousands)	Inflow						
TSMC China	Manufacturing and selling of integrated circuits at the order of and pursuant to product design specifications provided by customers	\$ 18,939,667 (RMB 4,502,080)	Note 1	\$ 18,939,667 (US\$ 596,000)	\$ -	\$ -	\$ 18,939,667 (US\$ 596,000)	\$ 6,181,335	100%	\$ 6,094,460 (Note 2)	\$ 42,618,308	\$ -
TSMC Nanjing	Manufacturing and selling of integrated circuits at the order of and pursuant to product design specifications provided by customers	6,435,200 (RMB 1,366,240)	Note 1	-	6,435,200 (US\$ 200,000)	-	6,435,200 (US\$ 200,000)	939	100%	939 (Note 2)	6,331,094	-

Accumulated Investment in Mainland China as of December 31, 2016 (US\$ in Thousands)	Investment Amounts Authorized by Investment Commission, MOEA (US\$ in Thousands)	Upper Limit on Investment
\$ 25,374,867 (US\$ 796,000)	\$ 119,412,667 (US\$3,596,000)	Note 3

Note 1: TSMC directly invested US\$596,000 thousand in TSMC China and US\$200,000 thousands in TSMC Nanjing.

Note 2: Amount was recognized based on the audited financial statements.

Note 3: As the Company has obtained the certificate of being qualified for operating headquarters issued by Industrial Development Bureau, MOEA on August 2016, the upper limit on investment in mainland China pursuant to "Principle of Investment or Technical Cooperation in Mainland China" is not applicable.



**Taiwan Semiconductor Manufacturing  
Company Limited**

**Parent Company Only Financial Statements for the  
Years Ended December 31, 2016 and 2015 and  
Independent Auditors' Report**



## INDEPENDENT AUDITORS' REPORT

The Board of Directors and Shareholders  
Taiwan Semiconductor Manufacturing Company Limited

### Opinion

We have audited the accompanying parent company only financial statements of Taiwan Semiconductor Manufacturing Company Limited (the "Company"), which comprise the parent company only balance sheets as of December 31, 2016 and 2015, and the parent company only statements of comprehensive income, changes in equity and cash flows for the years then ended, and the notes to the parent company only financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying parent company only financial statements present fairly, in all material respects, the parent company only financial position of the Company as of December 31, 2016 and 2015, and its parent company only financial performance and its parent company only cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers.

### Basis for Opinion

We conducted our audits in accordance with the Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants and auditing standards generally accepted in the Republic of China. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of Parent Company Only Financial Statements section of our report. We are independent of the Company in accordance with The Norm of Professional Ethics for Certified Public Accountant of the Republic of China, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the parent company only financial statements for the year ended December 31, 2016. These matters were addressed in the context of our audit of the parent company only financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters for the Company's parent company only financial statements for the year ended December 31, 2016 are stated as follows:

#### Provision of sales returns and allowances

In consideration of business volume and market conditions, the Company provides a variety of business incentives to specific customers or products. The provision of sales returns and allowance is based on historical experience and the varying contractual terms by management's judgment. Please refer to Notes 4, 5 and 16 to the parent company only financial statements for the details of the information about provision of sales returns and allowances. Since the provision of sales returns and allowances is subject to management's judgment, which has significant uncertainty, and the result could also affect the net revenue in the parent company only financial statements, it has been identified as a key audit matter.



Our key audit procedures performed in respect of the above area included the following:

1. Understood and tested the design and operating effectiveness of the key controls over provision of sales returns and allowances;
2. Understood and assessed the reasonableness of management's assumptions made and methodology used in estimating provision of sales returns and allowances;
3. Sampled and inspected the Company's sales contracts of main products by agreeing the contractual terms and performed an analysis to challenge management's estimation on possibility that specific products could meet business incentives condition to verify the reasonableness of the accrual of the provision;
4. Performed a retrospective review to comparatively analyze the historical accuracy of judgments with reference to actual sales allowance paid.

#### Timing to commence depreciation of property, plant and equipment (PP&E)

The Company continues to invest in capital expenditures to develop and build capacity in leading-edge technologies to meet customers' demand. Please refer to Notes 4 and 12 to the parent company only financial statements for the details of the information and accounting policy about the depreciation of PP&E. According to International Accounting Standards 16, depreciation of PP&E should commence when the assets are available for their intended use. Due to the significant capital expenditures incurred by the Company, the appropriateness of the timing to commence depreciation of PP&E could have a material impact on its financial performance. Consequently, the validity of the timing to commence depreciation of PP&E is identified as a key audit matter.

Our key audit procedures performed in respect of the above area included the following:

1. Understood and tested the design and operating effectiveness of the key controls over the timing to commence depreciation of PP&E;
2. Understood the criteria the assets are defined as available for use intended by management and the corresponding accounting treatments;
3. Sampled and reviewed the appropriateness of the timing for commencing depreciation after the assets met the criteria of available for use in current year;
4. Performed an observation on the physical count of equipment under installation and construction in progress; sampled and inspected the supporting documentation to verify that the status of equipment under installation and construction in progress are not available for use;
5. Sampled equipment under installation and construction in progress which met the criteria of available for use and were transferred in the subsequent period to evaluate the reasonableness of the timing for commencing depreciation;
6. Sampled and reviewed the appropriateness of the equipment under installation and construction in progress which are not available for their intended use.

#### **Responsibilities of Management and Those Charged with Governance for the Parent Company Only Financial Statements**

Management is responsible for the preparation and fair presentation of the parent company only financial statements in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers, and for such internal control as management determines is necessary to enable the preparation of parent company only financial statements that are free from material misstatement, whether due to fraud or error.



In preparing the parent company only financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance (including members of the Audit Committee) are responsible for overseeing the Company's financial reporting process.

### **Auditors' Responsibilities for the Audit of the Parent Company Only Financial Statements**

Our objectives are to obtain reasonable assurance about whether the parent company only financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the auditing standards generally accepted in the Republic of China will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these parent company only financial statements.

As part of an audit in accordance with the auditing standards generally accepted in the Republic of China, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

1. Identify and assess the risks of material misstatement of the parent company only financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
2. Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
3. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
4. Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the parent company only financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Company to cease to continue as a going concern.
5. Evaluate the overall presentation, structure and content of the parent company only financial statements, including the disclosures, and whether the parent company only financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
6. Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the parent company only financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the parent company only financial statements for the year ended December 31, 2016 and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partners on the audit resulting in this independent auditors' report are Yih-Shin Kao and Yu Feng Huang.

Deloitte & Touche  
Taipei, Taiwan  
The Republic of China



February 14, 2017

Notice to Readers

*The accompanying financial statements are intended only to present the financial position, financial performance and cash flows in accordance with accounting principles and practices generally accepted in the Republic of China and not those of any other jurisdictions. The standards, procedures and practices to audit such financial statements are those generally applied in the Republic of China.*

*For the convenience of readers, the independent auditors' report and the accompanying financial statements have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditors' report and financial statements shall prevail.*



# Taiwan Semiconductor Manufacturing Company Limited

## PARENT COMPANY ONLY BALANCE SHEETS (In Thousands of New Taiwan Dollars)

ASSETS	December 31, 2016		December 31, 2015	
	Amount	%	Amount	%
<b>CURRENT ASSETS</b>				
Cash and cash equivalents (Note 6)	\$ 249,878,563	14	\$ 264,493,583	16
Financial assets at fair value through profit or loss (Note 7)	151,070	-	6,026	-
Available-for-sale financial assets	2,843,952	-	706,924	-
Held-to-maturity financial assets (Note 8)	11,447,538	1	9,166,523	1
Notes and accounts receivable, net (Note 9)	40,017,297	2	25,636,123	2
Receivables from related parties (Note 31)	86,845,570	5	57,282,682	4
Other receivables from related parties (Note 31)	948,800	-	455,327	-
Inventories (Notes 5, 10 and 34)	46,504,346	2	64,338,188	4
Other financial assets (Notes 34)	2,139,366	-	1,766,573	-
Other current assets (Note 14)	3,004,662	-	3,061,131	-
Total current assets	443,781,164	24	426,913,080	27
<b>NONCURRENT ASSETS</b>				
Held-to-maturity financial assets (Note 8)	-	-	1,621,424	-
Financial assets carried at cost	435,268	-	343,721	-
Investments accounted for using equity method (Notes 5 and 11)	396,855,708	22	324,365,592	20
Property, plant and equipment (Notes 5 and 12)	979,401,337	53	831,784,912	52
Intangible assets (Notes 5 and 13)	10,047,991	1	9,391,418	1
Deferred income tax assets (Notes 5 and 26)	6,446,781	-	4,506,675	-
Refundable deposits	369,895	-	398,693	-
Other noncurrent assets (Note 14)	-	-	360,000	-
Total noncurrent assets	1,393,556,980	76	1,172,772,435	73
<b>TOTAL</b>	<b>\$ 1,837,338,144</b>	<b>100</b>	<b>\$ 1,599,685,515</b>	<b>100</b>
<b>LIABILITIES AND EQUITY</b>				
<b>CURRENT LIABILITIES</b>				
Short-term loans (Note 15)	\$ 57,958,200	3	\$ 39,474,000	2
Financial liabilities at fair value through profit or loss (Note 7)	62,441	-	45,254	-
Accounts payable	24,533,924	1	16,702,970	1
Payables to related parties (Note 31)	4,840,001	-	3,759,631	-
Salary and bonus payable	11,570,505	1	9,603,908	1
Accrued profit sharing bonus to employees and compensation to directors (Notes 20 and 28)	22,794,771	1	20,913,074	1
Payables to contractors and equipment suppliers	62,449,143	4	25,346,206	2
Income tax payable (Notes 5 and 26)	40,256,148	2	32,975,435	2
Provisions (Notes 5 and 16)	16,991,612	1	9,011,863	1
Long-term liabilities - current portion (Note 17)	38,100,000	2	12,000,000	1
Accrued expenses and other current liabilities (Note 19)	28,620,469	2	24,466,937	2
Total current liabilities	308,177,214	17	194,299,278	13
<b>NONCURRENT LIABILITIES</b>				
Bonds payable (Note 17)	116,100,000	6	154,200,000	10
Deferred income tax liabilities (Notes 5 and 26)	141,183	-	31,271	-
Net defined benefit liability (Notes 5 and 18)	8,551,408	-	7,448,026	-
Guarantee deposits (Note 19)	14,666,542	1	21,554,374	1
Others (Note 16)	453,536	-	480,847	-
Total noncurrent liabilities	139,912,669	7	183,714,518	11
Total liabilities	448,089,883	24	378,013,796	24
<b>EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT</b>				
Capital stock (Note 20)	259,303,805	14	259,303,805	16
Capital surplus (Note 20)	56,272,304	3	56,300,215	3
Retained earnings (Note 20)				
Appropriated as legal capital reserve	208,297,945	12	177,640,561	11
Unappropriated earnings	863,710,224	47	716,653,025	45
	1,072,008,169	59	894,293,586	56
Others (Note 20)	1,663,983	-	11,774,113	1
Total equity	1,389,248,261	76	1,221,671,719	76
<b>TOTAL</b>	<b>\$ 1,837,338,144</b>	<b>100</b>	<b>\$ 1,599,685,515</b>	<b>100</b>

The accompanying notes are an integral part of the parent company only financial statements.

# Taiwan Semiconductor Manufacturing Company Limited

## PARENT COMPANY ONLY STATEMENTS OF COMPREHENSIVE INCOME (In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2016		2015	
	Amount	%	Amount	%
NET REVENUE (Notes 5, 22 and 31)	\$ 936,387,291	100	\$ 837,046,888	100
COST OF REVENUE (Notes 5, 10, 28, 31 and 34)	<u>474,552,913</u>	<u>51</u>	<u>439,356,165</u>	<u>52</u>
GROSS PROFIT BEFORE REALIZED (UNREALIZED) GROSS PROFIT ON SALES TO SUBSIDIARIES AND ASSOCIATES	461,834,378	49	397,690,723	48
REALIZED (UNREALIZED) GROSS PROFIT ON SALES TO SUBSIDIARIES AND ASSOCIATES	<u>(26,082)</u>	<u>-</u>	<u>18,117</u>	<u>-</u>
GROSS PROFIT	<u>461,808,296</u>	<u>49</u>	<u>397,708,840</u>	<u>48</u>
OPERATING EXPENSES (Notes 5, 28 and 31)				
Research and development	70,366,179	8	64,831,860	8
General and administrative	18,697,463	2	16,138,095	2
Marketing	<u>3,098,086</u>	<u>-</u>	<u>2,983,080</u>	<u>-</u>
Total operating expenses	<u>92,161,728</u>	<u>10</u>	<u>83,953,035</u>	<u>10</u>
OTHER OPERATING INCOME AND EXPENSES, NET (Notes 12 and 28)	<u>83,965</u>	<u>-</u>	<u>(347,107)</u>	<u>-</u>
INCOME FROM OPERATIONS	<u>369,730,533</u>	<u>39</u>	<u>313,408,698</u>	<u>38</u>
NON-OPERATING INCOME AND EXPENSES				
Share of profits of subsidiaries and associates (Note 11)	14,941,372	2	33,694,186	4
Other income (Note 23)	1,816,803	-	1,839,862	-
Foreign exchange gain, net (Note 35)	609,345	-	2,698,396	-
Finance costs (Note 24)	(2,643,193)	-	(2,440,459)	-
Other gains and losses (Note 25)	<u>734,100</u>	<u>-</u>	<u>787,985</u>	<u>-</u>
Total non-operating income and expenses	<u>15,458,427</u>	<u>2</u>	<u>36,579,970</u>	<u>4</u>
INCOME BEFORE INCOME TAX	385,188,960	41	349,988,668	42
INCOME TAX EXPENSE (Notes 5 and 26)	<u>50,941,780</u>	<u>5</u>	<u>43,414,831</u>	<u>5</u>
NET INCOME	<u>334,247,180</u>	<u>36</u>	<u>306,573,837</u>	<u>37</u>

(Continued)



# Taiwan Semiconductor Manufacturing Company Limited

## PARENT COMPANY ONLY STATEMENTS OF COMPREHENSIVE INCOME (In Thousands of New Taiwan Dollars, Except Earnings Per Share)

	2016		2015	
	Amount	%	Amount	%
OTHER COMPREHENSIVE INCOME (LOSS)				
(Notes 11, 18, 20 and 26)				
Items that will not be reclassified subsequently to profit or loss:				
Remeasurement of defined benefit obligation	\$ (1,057,220)	-	\$ (827,703)	-
Share of other comprehensive loss of subsidiaries and associates	(19,961)	-	(2,523)	-
Income tax benefit related to items that will not be reclassified subsequently	<u>126,867</u>	-	<u>99,324</u>	-
	<u>(950,314)</u>	-	<u>(730,902)</u>	-
Items that may be reclassified subsequently to profit or loss:				
Exchange differences arising on translation of foreign operations	(9,439,776)	(1)	6,525,608	1
Changes in fair value of available-for-sale financial assets	47,506	-	94,064	-
Share of other comprehensive loss of subsidiaries and associates	(656,684)	-	(20,578,859)	(3)
Income tax expense related to items that may be reclassified subsequently	<u>(61,176)</u>	-	<u>(15,991)</u>	-
	<u>(10,110,130)</u>	(1)	<u>(13,975,178)</u>	(2)
Other comprehensive loss for the year, net of income tax	<u>(11,060,444)</u>	(1)	<u>(14,706,080)</u>	(2)
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	<u>\$ 323,186,736</u>	<u>35</u>	<u>\$ 291,867,757</u>	<u>35</u>
EARNINGS PER SHARE (NT\$, Note 27)				
Basic earnings per share	<u>\$ 12.89</u>		<u>\$ 11.82</u>	
Diluted earnings per share	<u>\$ 12.89</u>		<u>\$ 11.82</u>	

The accompanying notes are an integral part of the parent company only financial statements. (Concluded)

### Taiwan Semiconductor Manufacturing Company Limited

PARENT COMPANY ONLY STATEMENTS OF CHANGES IN EQUITY  
(In Thousands of New Taiwan Dollars, Except Dividends Per Share)

	Capital Stock - Common Stock		Capital Surplus	Legal Capital Reserve	Retained Earnings		Foreign Currency Translation Reserve	Others		Total Equity	
	Shares (In Thousands)	Amount			Unappropriated Earnings	Unrealized Gain/Loss from Available-for-sale Financial Assets		Cash Flow Hedges Reserve	Total		
BALANCE, JANUARY 1, 2015	25,929,662	\$ 259,296,624	\$ 55,989,922	\$ 151,250,682	\$ 553,914,592	\$ 705,166,274	\$ 4,502,113	\$ 21,247,483	\$ (305)	\$ 25,749,291	\$ 1,046,201,111
Appropriations of prior year's earnings	-	-	-	26,389,879	(26,389,879)	-	-	-	-	-	-
Legal capital reserve	-	-	-	26,389,879	(116,683,481)	(116,683,481)	-	-	-	-	(116,683,481)
Cash dividends to shareholders - NTS\$4.5 per share	-	-	-	26,389,879	(143,073,360)	(116,683,481)	-	-	-	-	(116,683,481)
Total	-	-	-	-	306,573,837	306,573,837	-	-	-	-	306,573,837
Net income in 2015	-	-	-	-	(730,902)	(730,902)	6,537,836	(20,512,712)	(302)	(13,975,178)	(14,706,080)
Other comprehensive income (loss) in 2015, net of income tax	-	-	-	-	305,842,935	305,842,935	6,537,836	(20,512,712)	(302)	(13,975,178)	291,867,757
Total comprehensive income (loss) in 2015	-	-	-	-	-	-	-	-	-	-	138,155
Issuance of stock from exercise of employee stock options	718	7,181	130,974	-	-	-	-	-	-	-	(26,537)
Disposal of investments accounted for using equity method	-	-	(26,537)	-	-	-	-	-	-	-	209,430
Adjustments to share of changes in equities of associates	-	-	209,430	-	-	-	-	-	-	-	(31,142)
From differences between equity purchase price and carrying amount arising from actual acquisition or disposal of subsidiaries	-	-	-	-	(31,142)	(31,142)	-	-	-	-	(3,574)
From share of changes in equities of subsidiaries	-	-	(3,574)	-	-	-	-	-	-	-	1,221,671,719
BALANCE, DECEMBER 31, 2015	25,930,380	259,303,805	56,300,215	177,640,561	716,653,025	894,293,586	11,039,949	734,771	(607)	11,774,113	1,221,671,719
Appropriations of prior year's earnings	-	-	-	30,657,384	(30,657,384)	-	-	-	-	-	-
Legal capital reserve	-	-	-	30,657,384	(155,582,283)	(155,582,283)	-	-	-	-	(155,582,283)
Cash dividends to shareholders - NTS\$6.0 per share	-	-	-	30,657,384	(186,239,667)	(155,582,283)	-	-	-	-	(155,582,283)
Total	-	-	-	-	334,247,180	334,247,180	-	-	-	-	334,247,180
Net income in 2016	-	-	-	-	(950,314)	(950,314)	(9,378,712)	(732,130)	712	(10,110,130)	(11,060,444)
Other comprehensive income (loss) in 2016, net of income tax	-	-	-	-	333,296,866	333,296,866	(9,378,712)	(732,130)	712	(10,110,130)	323,186,736
Total comprehensive income (loss) in 2016	-	-	-	-	-	-	-	-	-	-	(56,169)
Disposal of investments accounted for using equity method	-	-	(56,169)	-	-	-	-	-	-	-	21,221
Adjustments to share of changes in equities of associates	-	-	21,221	-	-	-	-	-	-	-	7,037
From share of changes in equities of subsidiaries	-	-	7,037	-	-	-	-	-	-	-	-
BALANCE, DECEMBER 31, 2016	25,930,380	\$ 259,303,805	\$ 56,272,304	\$ 208,297,945	\$ 863,710,224	\$ 1,072,008,169	\$ 1,661,237	\$ 2,641	\$ 105	\$ 1,663,983	\$ 1,389,248,261

The accompanying notes are an integral part of the parent company only financial statements.

# Taiwan Semiconductor Manufacturing Company Limited

## PARENT COMPANY ONLY STATEMENTS OF CASH FLOWS (In Thousands of New Taiwan Dollars)

	2016	2015
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Income before income tax	\$ 385,188,960	\$ 349,988,668
Adjustments for:		
Depreciation expense	213,977,324	213,293,810
Amortization expense	3,724,066	3,159,437
Finance costs	2,643,193	2,440,459
Share of profits of subsidiaries and associates	(14,941,372)	(33,694,186)
Interest income	(1,683,150)	(1,726,503)
Gain on disposal of property, plant and equipment, net	(100,503)	(21,569)
Impairment loss on property, plant and equipment	-	228,037
Impairment loss on financial assets	4,537	21,437
Gain on disposal of available-for-sale financial assets, net	(101,411)	(51)
Loss (gain) on disposal of investments accounted for using equity method, net	296,065	(2,419,785)
Unrealized (realized) gross profit on sales to subsidiaries and associates	26,082	(18,117)
Loss (gain) on foreign exchange, net	(2,656,406)	2,548,291
Dividend income	(133,653)	(113,359)
Changes in operating assets and liabilities:		
Financial instruments at fair value through profit or loss	(127,857)	(249,322)
Notes and accounts receivable, net	(20,448,337)	(6,375,554)
Receivables from related parties	(29,562,888)	31,322,516
Other receivables from related parties	(493,473)	108,834
Inventories	17,833,842	(759,653)
Other financial assets	(22,662)	823,847
Other current assets	18,337	(142,763)
Accounts payable	7,639,380	(1,916,970)
Payables to related parties	1,108,002	(1,024,427)
Salary and bonus payable	1,966,597	595,592
Accrued profit sharing bonus to employees and compensation to directors	1,881,697	2,860,254
Accrued expenses and other current liabilities	3,891,345	(2,788,099)
Provisions	7,961,632	(948,176)
Net defined benefit liability	46,163	73,473
Cash generated from operations	<u>577,935,510</u>	<u>555,266,121</u>
Income taxes paid	<u>(45,387,724)</u>	<u>(40,493,290)</u>
Net cash generated by operating activities	<u>532,547,786</u>	<u>514,772,831</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Acquisitions of:		
Available-for-sale financial assets	(172)	(3,628)
Held to maturity financial assets	(11,242,766)	(23,074,925)
Investments accounted for using equity method	(445,012)	-

(Continued)

# Taiwan Semiconductor Manufacturing Company Limited

## PARENT COMPANY ONLY STATEMENTS OF CASH FLOWS (In Thousands of New Taiwan Dollars)

	2016	2015
Equity interest in subsidiary	\$ (1,630,700)	\$ (394,674)
Property, plant and equipment	(323,009,940)	(249,921,656)
Intangible assets	(4,207,065)	(4,269,815)
Proceeds from disposal or redemption of:		
Available-for-sale financial assets	126,289	3,679
Held-to-maturity financial assets	10,550,000	16,800,000
Financial assets carried at cost	-	8,000
Investments accounted for using equity method	-	3,962,848
Equity interest in subsidiary	2,325	806,807
Property, plant and equipment	104,020	347,840
Proceeds from return of capital of financial assets carried at cost	7,493	-
Interest received	1,748,570	1,636,497
Other dividends received	133,653	113,359
Dividends received from investments accounted for using equity method	5,469,549	3,001,834
Refundable deposits paid	(138,204)	(404,253)
Refundable deposits refunded	169,464	348,283
Decrease (increase) in receivables for temporary payments	47,924	(47,924)
Cash inflow (outflow) from incorporation of subsidiary	<u>396,262</u>	<u>(3,725,916)</u>
Net cash used in investing activities	<u>(321,918,310)</u>	<u>(254,813,644)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Increase in short-term loans	18,968,936	3,138,680
Repayment of bonds	(12,000,000)	-
Interest paid	(2,644,187)	(2,456,299)
Guarantee deposits received	420,719	747,108
Guarantee deposits refunded	(421,002)	(740,829)
Cash dividends	(155,582,283)	(116,683,481)
Proceeds from exercise of employee stock options	-	33,891
Payment of partial acquisition of interests in subsidiaries	(74,130,714)	(64,744,242)
Proceeds from partial disposal of interests in subsidiaries	<u>144,035</u>	<u>380,336</u>
Net cash used in financing activities	<u>(225,244,496)</u>	<u>(180,324,836)</u>
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(14,615,020)	79,634,351
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	<u>264,493,583</u>	<u>184,859,232</u>
CASH AND CASH EQUIVALENTS, END OF YEAR	<u>\$ 249,878,563</u>	<u>\$ 264,493,583</u>

The accompanying notes are an integral part of the parent company only financial statements.

(Concluded)



# Taiwan Semiconductor Manufacturing Company Limited

## NOTES TO PARENT COMPANY ONLY FINANCIAL STATEMENTS FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015

(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

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### 1. GENERAL

Taiwan Semiconductor Manufacturing Company Limited (the “Company” or “TSMC”), a Republic of China (R.O.C.) corporation, was incorporated on February 21, 1987. The Company is a dedicated foundry in the semiconductor industry which engages mainly in the manufacturing, selling, packaging, testing and computer-aided design of integrated circuits and other semiconductor devices and the manufacturing of masks.

On September 5, 1994, the Company’s shares were listed on the Taiwan Stock Exchange (TWSE). On October 8, 1997, the Company listed some of its shares of stock on the New York Stock Exchange (NYSE) in the form of American Depositary Shares (ADSs).

The address of its registered office and principal place of business is No. 8, Li-Hsin Rd. 6, Hsinchu Science Park, Taiwan.

### 2. THE AUTHORIZATION OF FINANCIAL STATEMENTS

The accompanying parent company only financial statements were approved and authorized for issue by the Board of Directors on February 14, 2017.

### 3. APPLICATION OF NEW AND REVISED INTERNATIONAL FINANCIAL REPORTING STANDARDS

As of the date that the accompanying parent company only financial statements were authorized for issue, the Company have not applied the following amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), Interpretations of IFRS (IFRIC), and Interpretations of IAS (SIC) issued by the International Accounting Standards Board (IASB) (collectively, “IFRSs”).

#### a. Amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers

Rule No. 1050050021 issued by Financial Supervisory Commission (FSC) stipulated that starting January 1, 2017, the Company should apply the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers.

The amendments include additions of several accounting items and requirements for disclosures of impairment of non-financial assets as a consequence of the IFRSs endorsed by the FSC for application starting from 2017. In addition, as a result of the post implementation review of IFRSs in Taiwan, the amendments also include emphasis on certain recognition and measurement considerations and add requirements for disclosures of related party transactions and goodwill.

The amendments stipulate that other companies or institutions of which the chairman of the board of directors or president serves as the chairman of the board of directors or the president, or is the spouse or second immediate family of the chairman of the board of directors or president of the Company are deemed to have a substantive related party relationship, unless it can be demonstrated that no control, joint control, or significant influence exists. Furthermore, the amendments require the disclosure of the names of the related parties and the relationship with whom the Company has significant transaction.

If the transaction or balance with a specific related party is 10% or more of the Company's respective total transaction or balance, such transaction should be separately disclosed by the name of each related party.

The amendments also require additional disclosure if there is a significant difference between the actual operation after business combination and the expected benefits on acquisition date.

The disclosures of related party transactions and impairment of goodwill will be enhanced when the above amendments are retrospectively applied in 2017.

Except for the aforementioned impact, as of the date that the accompanying parent company only financial statements were authorized for issue, the Company continues in evaluating the impact on its financial position and financial performance as a result of amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers. The related impact will be disclosed when the Company completes the evaluation.

b. The IFRSs in issue and endorsed by FSC with effective date starting 2017

According to Rule No. 1050026834 issued by the FSC, the following IFRSs issued by the IASB and endorsed by the FSC should be adopted by the Company starting 2017.

<b>New, Revised or Amended Standards and Interpretations</b>	<b>Effective Date Issued by IASB (Note 1)</b>
Annual Improvements to IFRSs 2010 - 2012 Cycle	July 1, 2014 or transactions on or after July 1, 2014
Annual Improvements to IFRSs 2011 - 2013 Cycle	July 1, 2014
Annual Improvements to IFRSs 2012 - 2014 Cycle	January 1, 2016 (Note 2)
Amendments to IFRS 10, IFRS 12 and IAS 28 "Investment Entities: Applying the Consolidation Exception"	January 1, 2016
Amendment to IFRS 11 "Accounting for Acquisitions of Interests in Joint Operations"	January 1, 2016
Amendment to IAS 1 "Disclosure Initiative"	January 1, 2016
Amendments to IAS 16 and IAS 38 "Clarification of Acceptable Methods of Depreciation and Amortization"	January 1, 2016
Amendment to IAS 19 "Defined Benefit Plans: Employee Contributions"	July 1, 2014
Amendment to IAS 27 "Equity Method in Separate Financial Statements"	January 1, 2016
Amendment to IAS 36 "Recoverable Amount Disclosures for Non-Financial Assets"	January 1, 2014
Amendment to IAS 39 "Novation of Derivatives and Continuation of Hedge Accounting"	January 1, 2014

Note 1: The aforementioned new, revised or amended standards or interpretations are effective after fiscal year beginning on or after the effective dates, unless specified otherwise.

Note 2: The amendment to IFRS 5 is applied prospectively to changes in a method of disposal that occur in annual periods beginning on or after January 1, 2016; the remaining amendments are effective for annual periods beginning on or after January 1, 2016.

Except for the following, the Company believes that the adoption of aforementioned IFRSs with effective date starting 2017 will not have a significant effect on the Company's accounting policies:

1) Amendments to IAS 36, "Recoverable Amount Disclosures for Non-Financial Assets"

The amendments to IAS 36 clarify that the Company is required to disclose the recoverable amount of an asset or a cash-generating unit only when an impairment loss on the asset has been recognized or reversed during the period. Furthermore, if the recoverable amount for which impairment loss has been recognized or reversed is fair value less costs of disposal, the Company is required to disclose the fair value hierarchy. If the fair value measurements are categorized within Level 2 or Level 3, the valuation technique and key assumptions used to measure the fair value are disclosed. The discount rate used is disclosed if such fair value less costs of disposal is measured by using present value technique. The Company expects the aforementioned amendments will result in a broader disclosure of recoverable amount for non-financial assets.

Except for the aforementioned impact, as of the date that the accompanying parent company only financial statements were authorized for issue, the Company continues in evaluating the impact on its financial position and financial performance as a result of IFRSs with effective date starting 2017. The related impact will be disclosed when the Company completes the evaluation.

c. The IFRSs issued by IASB but not yet endorsed by FSC

The Company has not applied the following IFRSs issued by the IASB but not endorsed by the FSC. The FSC announced that the Company should apply IFRS 9 and IFRS 15 starting January 1, 2018. As of the date the parent company only financial statements were authorized for issue, the FSC has not announced the effective dates of other new IFRSs.

<b>New, Revised or Amended Standards and Interpretations</b>	<b>Effective Date Issued by IASB (Note 3)</b>
Annual Improvements to IFRSs 2014-2016 Cycle	Note 4
Amendment to IFRS 2 "Classification and Measurement of Share-based Payment Transactions"	January 1, 2018
IFRS 9 "Financial Instruments"	January 1, 2018
Amendments to IFRS 9 and IFRS 7 "Mandatory Effective Date of IFRS 9 and Transition Disclosure"	January 1, 2018
Amendments to IFRS 10 and IAS 28 "Sale or Contribution of Assets between an Investor and its Associate or Joint Venture"	To be determined by IASB
IFRS 15 "Revenue from Contracts with Customers"	January 1, 2018
Amendment to IFRS 15 "Clarifications to IFRS 15"	January 1, 2018
IFRS 16 "Leases"	January 1, 2019
Amendment to IAS 7 "Disclosure Initiative"	January 1, 2017
Amendment to IAS 12 "Recognition of Deferred Tax Assets for Unrealized Losses"	January 1, 2017
IFRIC 22 "Foreign Currency Transactions and Advance Consideration"	January 1, 2018

Note 3: The aforementioned new, revised or amended standards or interpretations are effective after fiscal year beginning on or after the effective dates, unless specified otherwise.

Note 4: The amendment to IFRS 12 is retrospectively applied for annual periods beginning on or after January 1, 2017; the amendment to IAS 28 is retrospectively applied for annual periods beginning on or after January 1, 2018.

Except for the following items, the Company believes that the adoption of aforementioned standards or interpretations will not have a significant effect on the Company's accounting policies.

1) IFRS 9, “Financial Instruments”

All recognized financial assets currently in the scope of IAS 39, “Financial Instruments: Recognition and Measurement,” will be subsequently measured at either the amortized cost or the fair value. The classification and measurement requirements in IFRS 9 are stated as follows:

For the debt instruments invested by the Company, if the contractual cash flows that are solely for payments of principal and interest on the principal amount outstanding, the classification and measurement requirements are stated as follows:

- a) If the objective of the Company’s business model is to hold the financial asset to collect the contractual cash flows, such assets are measured at the amortized cost. Interest revenue should be recognized in profit or loss by using the effective interest method, continuously assessed for impairment and the impairment loss or reversal of impairment loss should be recognized in profit and loss.
- b) If the objective of the Company’s business model is to hold the financial asset both to collect the contractual cash flows and to sell the financial assets, such assets are measured at fair value through other comprehensive income and are continuously assessed for impairment. Interest revenue should be recognized in profit or loss by using the effective interest method. A gain or loss on a financial asset measured at fair value through other comprehensive income should be recognized in other comprehensive income, except for impairment gains or losses and foreign exchange gains and losses. When such financial asset is derecognized or reclassified, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss.

The other financial assets which do not meet the aforementioned criteria should be measured at the fair value through profit or loss. However, the Company may irrevocably designate an investment in equity instruments that is not held for trading as measured at fair value through other comprehensive income. All relevant gains and losses shall be recognized in other comprehensive income, except for dividends which are recognized in profit or loss. No subsequent impairment assessment is required, and the cumulative gain or loss previously recognized in other comprehensive income cannot be reclassified from equity to profit or loss.

IFRS 9 adds a new expected loss impairment model to measure the impairment of financial assets. A loss allowance for expected credit losses should be recognized on financial assets measured at amortized cost and financial assets mandatorily measured at fair value through other comprehensive income. If the credit risk on a financial instrument has not increased significantly since initial recognition, the Company should measure the loss allowance for that financial instrument at an amount equal to 12-month expected credit losses. If the credit risk on a financial instrument has increased significantly since initial recognition and is not deemed to be a low credit risk, the Company should measure the loss allowance for that financial instrument at an amount equal to the lifetime expected credit losses. The Company should always measure the loss allowance at an amount equal to lifetime expected credit losses for trade receivables.

The main changes in hedge accounting amended the application requirements for hedge accounting to better reflect the entity’s risk management activities. Compared with IAS 39, the main changes include: (1) enhancing types of transactions eligible for hedge accounting, specifically broadening the risks eligible for hedge accounting of non-financial items; (2) changing the way hedging derivative instruments are accounted for to reduce profit or loss volatility; and (3) replacing retrospective effectiveness assessment with the principle of economic relationship between the hedging instrument and the hedged item.



## 2) IFRS 15, “Revenue from Contracts with Customers” and related amendment

IFRS 15 establishes principles for recognizing revenue that apply to all contracts with customers, and will supersede IAS 18, “Revenue,” IAS 11, “Construction Contracts,” and a number of revenue-related interpretations.

When applying IFRS 15, the Company shall recognize revenue by applying the following steps:

- Identify the contract with the customer;
- Identify the performance obligations in the contract;
- Determine the transaction price;
- Allocate the transaction price to the performance obligations in the contracts; and
- Recognize revenue when the entity satisfies a performance obligation.

When IFRS 15 and related amendment are effective, the Company may elect to apply this Standard either retrospectively to each prior reporting period presented or retrospectively with the cumulative effect of initially applying this Standard recognized at the date of initial application.

## 3) IFRS 16, “Leases”

IFRS 16 sets out the accounting standards for leases that will supersede IAS 17 and a number of related interpretations.

Under IFRS 16, if the Company is a lessee, it shall recognize right-of-use assets and lease liabilities for all leases on the parent company only balance sheets except for low-value and short-term leases. The Company may elect to apply the accounting method similar to the accounting for operating lease under IAS 17 to the low-value and short-term leases. On the parent company only statements of comprehensive income, the Company should present the depreciation expense charged on the right-of-use asset separately from interest expense accrued on the lease liability; interest is computed by using effective interest method. On the parent company only statements of cash flows, cash payments for both the principal and interest portion of the lease liability are classified within financing activities.

When IFRS 16 becomes effective, the Company may elect to apply this Standard either retrospectively to each prior reporting period presented or retrospectively with the cumulative effect of the initial application of this Standard recognized at the date of initial application.

Except for the aforementioned impact, as of the date that the accompanying parent company only financial statements were authorized for issue, the Company continues in evaluating the impact on its financial position and financial performance as a result of the initial adoption of the other standards or interpretations. The related impact will be disclosed when the Company completes the evaluation.

## 4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

For the convenience of readers, the accompanying parent company only financial statements have been translated into English from the original Chinese version prepared and used in the R.O.C. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language parent company only financial statements shall prevail.

### Statement of Compliance

The accompanying parent company only financial statements have been prepared in conformity with the Regulations Governing the Preparation of Financial Reports by Securities Issuers (the “Accounting Standards Used in Preparation of the Parent Company Only Financial Statements”).

## **Basis of Preparation**

The accompanying parent company only financial statements have been prepared on the historical cost basis except for financial instruments that are measured at fair values, as explained in the accounting policies below. Historical cost is generally based on the fair value of the consideration given in exchange for the assets.

When preparing the parent company only financial statements, the Company account for subsidiaries and associates by using the equity method. In order to agree with the amount of net income, other comprehensive income and equity attributable to shareholders of the parent in the consolidated financial statements, the differences of the accounting treatment between the parent company only basis and the consolidated basis are adjusted under the heading of investments accounted for using equity method, share of profits of subsidiaries and associates and share of other comprehensive income of subsidiaries and associates in the parent company only financial statements.

## **Foreign Currencies**

In preparing the parent company only financial statements, transactions in currencies other than the entity's functional currency (foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions. At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Such exchange differences are recognized in profit or loss in the year in which they arise. Non-monetary items measured at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Exchange differences arising on the retranslation of non-monetary items are included in profit or loss for the year except for exchange differences arising on the retranslation of non-monetary items in respect of which gains and losses are recognized directly in other comprehensive income, in which case, the exchange differences are also recognized directly in other comprehensive income. Non-monetary items that are measured in terms of historical cost in foreign currencies are not retranslated.

For the purposes of presenting parent company only financial statements, the assets and liabilities of the Company's foreign operations are translated into NT\$ using exchange rates prevailing at the end of each reporting period. Income and expense items are translated at the average exchange rates for the period. Exchange differences arising, if any, are recognized in other comprehensive income and accumulated in equity.

## **Classification of Current and Noncurrent Assets and Liabilities**

Current assets are assets held for trading purposes and assets expected to be converted to cash, sold or consumed within one year from the end of the reporting period. Current liabilities are obligations incurred for trading purposes and obligations expected to be settled within one year from the end of the reporting period. Assets and liabilities that are not classified as current are noncurrent assets and liabilities, respectively.

## **Cash Equivalents**

Cash equivalents, for the purpose of meeting short-term cash commitments, consist of highly liquid time deposits and investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

## **Financial Instruments**

Financial assets and liabilities shall be recognized when the Company becomes a party to the contractual provisions of the instruments.

Financial assets and liabilities are initially recognized at fair values. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognized immediately in profit or loss.

## **Financial Assets**

Financial assets are classified into the following specified categories: Financial assets “at fair value through profit or loss” (FVTPL), “held-to-maturity” financial assets, “available-for-sale” financial assets and “loans and receivables”. The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition. Regular way purchases or sales of financial assets are recognized and derecognized on a trade date or settlement date basis for which financial assets were classified in the same way, respectively. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the marketplace.

### Financial assets at fair value through profit or loss

Financial assets are classified as at fair value through profit or loss when the financial asset is either held for trading or it is designated as at fair value through profit or loss.

Financial assets at fair value through profit or loss are stated at fair value, with any gains or losses arising on remeasurement recognized in profit or loss.

### Held-to-maturity financial assets

Held-to-maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturity dates that the Company has the positive intent and ability to hold to maturity. Subsequent to initial recognition, held-to-maturity financial assets are measured at amortized cost using the effective interest method less any impairment.

### Available-for-sale financial assets

Available-for-sale financial assets are non-derivative financial assets that are either designated as available-for-sale or are not classified as (a) loans and receivables, (b) held-to-maturity financial assets or (c) financial assets at fair value through profit or loss.

Available-for-sale financial assets are measured at fair value. Interest income from available-for-sale monetary financial assets and dividends on available-for-sale equity investments are recognized in profit or loss. Other changes in the carrying amount of available-for-sale financial assets are recognized in other comprehensive income. When the investment is disposed of or is determined to be impaired, the cumulative gain or loss previously recognized in other comprehensive income is reclassified to profit or loss.

Dividends on available-for-sale equity instruments are recognized in profit or loss when the Company’s right to receive the dividends is established.

Available-for-sale equity instruments that do not have a quoted market price in an active market and whose fair value cannot be reliably measured are measured at cost less any identified impairment losses at the end of each reporting period. Such equity instruments are subsequently remeasured at fair value when their fair value can be reliably measured, and the difference between the carrying amount and fair value is recognized in profit or loss or other comprehensive income.

## Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Loans and receivables including cash and cash equivalents, notes and accounts receivable and other receivables are measured at amortized cost using the effective interest method, less any impairment, except for those loans and receivables with immaterial discounted effect.

## Impairment of financial assets

Financial assets, other than those carried at FVTPL, are assessed for indicators of impairment at the end of each reporting period. Those financial assets are considered to be impaired when there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial assets, their estimated future cash flows have been affected.

For financial assets carried at amortized cost, such as trade receivables, assets that are assessed not to be impaired individually are, in addition, assessed for impairment on a collective basis. The Company assesses the collectability of receivables by performing the account aging analysis and examining current trends in the credit quality of its customers.

For financial assets carried at amortized cost, the amount of the impairment loss is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the financial asset's original effective interest rate.

For financial assets measured at amortized cost, if, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment loss was recognized, the previously recognized impairment loss is reversed through profit or loss to the extent that the carrying amount of the financial assets at the date the impairment loss is reversed does not exceed what the amortized cost would have been had the impairment loss not been recognized.

When an available-for-sale financial asset is considered to be impaired, cumulative gains or losses previously recognized in other comprehensive income are reclassified to profit or loss in the year.

In respect of available-for-sale equity instruments, impairment losses previously recognized in profit or loss are not reversed through profit or loss. Any increase in fair value subsequent to the recognition of an impairment loss is recognized in other comprehensive income and accumulated under the heading of unrealized gains or losses from available-for-sale financial assets.

For financial assets carried at cost, the amount of the impairment loss is measured as the difference between the asset's carrying amount and the present value of the estimated future cash flows discounted at the current market rate of return for a similar financial asset. Such impairment loss will not be reversed in subsequent periods.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables, where the carrying amount is reduced through the use of an allowance account. When a trade receivable is considered uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against the allowance account.

## Derecognition of financial assets

The Company derecognizes a financial asset only when the contractual rights to the cash flows from the financial asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the financial asset to another entity.



On derecognition of a financial asset in its entirety, the difference between the financial asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognized in other comprehensive income and accumulated in equity is recognized in profit or loss.

## **Financial Liabilities and Equity Instruments**

### Classification as debt or equity

Debt and equity instruments issued by the Company are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

### Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Company are recognized at the proceeds received, net of direct issue costs.

### Financial liabilities

Financial liabilities are subsequently measured either at amortized cost using effective interest method or at FVTPL.

Financial liabilities are classified as at fair value through profit or loss when the financial liability is either held for trading or is designated as at fair value through profit or loss.

Financial liabilities at fair value through profit or loss are stated at fair value, with any gains or losses arising on remeasurement recognized in profit or loss.

Financial liabilities other than those held for trading purposes and designated as at FVTPL are subsequently measured at amortized cost at the end of each reporting period.

### Derecognition of financial liabilities

The Company derecognizes financial liabilities when, and only when, the Company's obligations are discharged, cancelled or they expire. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable is recognized in profit or loss.

## **Derivative Financial Instruments**

Derivative financial instruments are initially recognized at fair value at the date the derivative contracts are entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in profit or loss immediately unless the derivative financial instrument is designated and effective as a hedging instrument, in which event the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

## **Financial Instruments Designated as at Fair Value through Profit or Loss**

A financial instrument may be designated as at fair value through profit or loss (FVTPL) upon initial recognition. The financial instrument forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Company's documented risk management or investment strategy, and information about the grouping is provided internally on that basis.

## **Inventories**

Inventories are stated at the lower of cost or net realizable value. Inventories are recorded at standard cost and adjusted to approximate weighted-average cost at the end of the reporting period. Net realizable value represents the estimated selling price of inventories less all estimated costs of completion and costs necessary to make the sale.

## **Noncurrent Assets Held for Sale**

Noncurrent assets are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. This condition is regarded as met only when the sale is highly probable and the noncurrent asset held for sale is available for immediate sale in its present condition. To meet the criteria for the sale being highly probable, the appropriate level of management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

When the committed sale plan involves loss of control of a subsidiary, all of the investments of that subsidiary are classified as held for sale and still using equity methods, regardless of whether investments in its former subsidiary is retained after the sale.

Noncurrent assets classified as held for sale are measured at the lower of their previous carrying amount and fair value less costs to sell. Recognition of depreciation would cease.

## **Investments Accounted for Using Equity Method**

Investments accounted for using the equity method include investments in subsidiaries and associates.

### Investment in subsidiaries

A subsidiary is an entity that is controlled by the Company.

Under the equity method, an investment in a subsidiary is initially recognized at cost and adjusted thereafter to recognize the Company's share of profit or loss and other comprehensive income of the subsidiary as well as the distribution received. The Company also recognized its share in the changes in the equity of subsidiaries.

Changes in the Company's ownership interests in subsidiaries that do not result in the Company losing control over the subsidiaries are accounted for as equity transactions. Any difference between the carrying amount of the subsidiary and the fair value of the consideration paid or received is recognized directly in equity.

When the Company loses control of a subsidiary, any retained investment of the former subsidiary is measured at the fair value at that date. A gain or loss is recognized in profit or loss and calculated as the difference between (a) the aggregate of the fair value of consideration received and the fair value of any retained interest at the date when control is lost; and (b) the previous carrying amount of the investments in such subsidiary. In addition, the Company shall account for all amounts previously recognized in other comprehensive income in relation to the subsidiary on the same basis as would be required if the subsidiary had directly disposed of the related assets and liabilities.

When the Company transacts with its subsidiaries, profits and losses resulting from the transactions with the subsidiaries are recognized in the Company's parent company only financial statements only to the extent of interests in the subsidiaries that are not owned by the Company.

### Investment in associates

An associate is an entity over which the Company has significant influence and that is neither a subsidiary nor a joint venture. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

The operating results and assets and liabilities of associates are incorporated in these parent company only financial statements using the equity method of accounting. Under the equity method, an investment in an associate is initially recognized in the statement of financial position at cost and adjusted thereafter to recognize the Company's share of profit or loss and other comprehensive income of the associate as well as the distribution received. The Company also recognizes its share in the changes in the equities of associates.

Any excess of the cost of acquisition over the Company's share of the net fair value of the identifiable assets, liabilities and contingent liabilities of an associate recognized at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment. Any excess of the Company's share of the net fair value of the identifiable assets, liabilities and contingent liabilities over the cost of acquisition, after reassessment, is recognized immediately in profit or loss.

When necessary, the entire carrying amount of the investment (including goodwill) is tested for impairment as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs to sell) with its carrying amount. Any impairment loss recognized forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized to the extent that the recoverable amount of the investment subsequently increases.

The Company discontinues the use of the equity method from the date when the Company ceases to have significant influence over an associate. When the Company retains an interest in the former associate, the Company measures the retained interest at fair value at that date. The difference between the carrying amount of the associate at the date the equity method was discontinued, and the fair value of any retained interest and any proceeds from disposing of a part interest in the associate is included in the determination of the gain or loss on disposal of the associate. In addition, the Company shall account for all amounts recognized in other comprehensive income in relation to that associate on the same basis as would be required if the associate had directly disposed of the related assets or liabilities. If the Company's ownership interest in an associate is reduced as a result of disposal, but the investment continues to be an associate, the Company should reclassify to profit or loss only a proportionate amount of the gain or loss previously recognized in other comprehensive income.

When the Company subscribes to additional shares in an associate at a percentage different from its existing ownership percentage, the resulting carrying amount of the investment differs from the amount of the Company's proportionate interest in the net assets of the associate. The Company records such a difference as an adjustment to investments with the corresponding amount charged or credited to capital surplus. If the Company's ownership interest is reduced due to the additional subscription to the shares of associate, the proportionate amount of the gains or losses previously recognized in other comprehensive income in relation to that associate shall be reclassified to profit or loss on the same basis as would be required if the associate or jointly controlled entity had directly disposed of the related assets or liabilities.

When the Company transacts with an associate, profits and losses resulting from the transactions with the associate are recognized in the Company's parent company only financial statements only to the extent of interests in the associate that are not owned by the Company.

### **Property, Plant and Equipment**

Property, plant and equipment are measured at cost less accumulated depreciation and accumulated impairment. Costs include any incremental costs that are directly attributable to the construction or acquisition of the item of property, plant and equipment.

Properties in the course of construction for production, supply or administrative purposes are carried at cost, less any recognized impairment loss. Such properties are classified to the appropriate categories of property, plant and equipment when completed and ready for intended use. Depreciation of these assets, on the same basis as other property assets, commences when the assets are ready for their intended use.

Depreciation is recognized so as to write off the cost of the assets less their residual values over their useful lives, and it is computed using the straight-line method over the following estimated useful lives: buildings - 10 to 20 years; machinery and equipment - 2 to 5 years; and office equipment - 3 to 5 years. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimates accounted for on a prospective basis. Land is not depreciated.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the assets. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognized in profit or loss.

## **Leases**

Leases are classified as finance lease whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

### The Company as lessor

Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease.

### The Company as lessee

Operating lease payments are recognized as an expense on a straight-line basis over the lease term.

## **Intangible Assets**

### Goodwill

Goodwill arising on an acquisition of a business is carried at cost as established at the date of acquisition of the business less accumulated impairment losses, if any.

### Other intangible assets

Other separately acquired intangible assets with finite useful lives are carried at cost less accumulated amortization and accumulated impairment losses. Amortization is recognized using the straight-line method over the following estimated useful lives: Technology license fees - the estimated life of the technology or the term of the technology transfer contract; software and system design costs - 3 years or contract period; patent and others – the economic life or contract period. The estimated useful life and amortization method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis.

## **Impairment of Tangible and Intangible Assets**

### Goodwill

Goodwill is not amortized and instead is tested for impairment annually, or more frequently when there is an indication that the cash-generating unit may be impaired. For the purpose of impairment testing, goodwill is allocated to each of the Company's cash-generating units or groups of cash-generating units that are expected to benefit. If the recoverable amount of a cash-generating unit is less than its carrying



amount, the difference is allocated first to reduce the carrying amount of any goodwill allocated to such cash-generating unit and then to the other assets of the cash-generating unit pro rata based on the carrying amount of each asset in the cash-generating unit. Any impairment loss for goodwill is recognized directly in profit or loss. An impairment loss recognized for goodwill is not reversed in subsequent periods.

#### Other tangible and intangible assets

At the end of each reporting period, the Company reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Company estimates the recoverable amount of the cash-generating unit to which the asset belongs. When a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Recoverable amount is the higher of fair value less costs to sell and value in use. 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 for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset or cash-generating unit is estimated to be less than its carrying amount, the carrying amount of the asset or cash-generating unit is reduced to its recoverable amount. An impairment loss is recognized immediately in profit or loss.

When an impairment loss subsequently reverses, the carrying amount of the asset or a cash-generating unit is increased to the revised estimate of its recoverable amount, but the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset or cash-generating unit in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

#### **Provision**

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that the Company will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows.

#### **Guarantee Deposit**

Guarantee deposit mainly consists of cash received under deposit agreements with customers to ensure they have access to the Company's specified capacity; and as guarantee of accounts receivable to ensure payment from customers. Cash received from customers is recorded as guarantee deposit upon receipt. Guarantee deposits are refunded to customers when terms and conditions set forth in the deposit agreements have been satisfied.

#### **Revenue Recognition**

Revenue is measured at the fair value of the consideration received or receivable. Revenue is reduced for estimated customer returns, rebates and other similar allowances.

### Sale of goods

Revenue from the sale of goods is recognized when the goods are delivered and titles have passed, at which time all the following conditions are satisfied:

- The Company has transferred to the buyer the significant risks and rewards of ownership of the goods;
- The Company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;
- The amount of revenue can be measured reliably;
- It is probable that the economic benefits associated with the transaction will flow to the Company; and
- The costs incurred or to be incurred in respect of the transaction can be measured reliably.

In principle, payment term granted to customers is due 30 days from the invoice date or 30 days from the end of the month of when the invoice is issued. Due to the short term nature of the receivables from sale of goods with the immaterial discounted effect, the Company measures them at the original invoice amounts without discounting.

### Royalties, dividend and interest income

Revenue from royalties is recognized on an accrual basis in accordance with the substance of the relevant agreement, provided that it is probable that the economic benefits will flow to the Company and the amount of revenue can be measured reliably.

Dividend income from investments is recognized when the shareholder's right to receive payment has been established, provided that it is probable that the economic benefits will flow to the Company and the amount of income can be measured reliably.

Interest income from a financial asset is recognized when it is probable that the economic benefits will flow to the Company and the amount of income can be measured reliably. Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable.

## **Employee Benefits**

### Short-term employee benefits

Liabilities recognized in respect of short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in exchange for service rendered by employees.

### Retirement benefits

For defined contribution retirement benefit plans, payments to the benefit plan are recognized as an expense when the employees have rendered service entitling them to the contribution. For defined benefit retirement benefit plans, the cost of providing benefit is recognized based on actuarial calculations.

Defined benefit costs (including service cost, net interest and rereasurement) under the defined benefit retirement benefit plans are determined using the Projected Unit Credit Method. Service cost (including current service cost), and net interest on the net defined benefit liability (asset) are recognized as employee benefits expense in the period they occur. Remeasurement, comprising actuarial gains and losses and the return on plan assets (excluding interest), is recognized in other comprehensive income in the period in which they occur. Remeasurement recognized in other comprehensive income is reflected immediately in retained earnings and will not be reclassified to profit or loss.

Net defined benefit liability represents the actual deficit in the Company's defined benefit plan.

## **Share-based Payment Arrangements**

The Company elected to take the optional exemption according to related guidance for the share-based payment transactions granted and vested before January 1, 2012, the date of transition to Accounting Standards Used in Preparation of the Parent Company Only Financial Statements. There were no stock options granted prior to but unvested at the date of transition.

The compensation costs of employee stock options that were granted after January 1, 2012 are measured at the fair value of the stock options at the grant date. The fair value of the stock option granted determined at the grant date of the stock options is expensed on a straight-line basis over the vesting period, based on the Company's estimate of the number of stock options that will eventually vest, with a corresponding increase in capital surplus - employee stock option. The estimate is revised if subsequent information indicates that the number of stock options expected to vest differs from original estimates.

## **Taxation**

Income tax expense represents the sum of the tax currently payable and deferred tax.

### Current tax

Income tax on unappropriated earnings at a rate of 10% is expensed in the year the shareholders approved the appropriation of earnings which is the year subsequent to the year the earnings are generated.

Adjustments of prior years' tax liabilities are added to or deducted from the current year's tax provision.

### Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the parent company only financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences and unused tax credits to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates, except where the Company is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments are only recognized to the extent that it is probable that there will be sufficient taxable profits against which to utilize the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the deferred tax asset to be recovered. The deferred tax assets which originally not recognized is also reviewed at the end of each reporting period and recognized to the extent that it is probable that sufficient taxable profits will be available to allow all or part of the deferred tax asset to be recovered.

Deferred tax liabilities and assets are measured at the tax rates that are expected to apply in the year in which the liability is settled or the asset is realized, 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 assets reflects the tax consequences that would follow from the manner in which the Company expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

### Current and deferred tax for the year

Current and deferred tax are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognized in other comprehensive income or directly in equity, respectively.

### **Insurance Claim**

The Company recognizes insurance claim reimbursement for losses incurred related to disaster damages. Insurance claim reimbursements are recorded, net of any deductible amounts, at the time while there is evidence that the claim reimbursement is virtually certain to be received.

### **Business Combinations**

Business combination involving group reorganization is not accounted for by acquisition method but accounted for at the carrying amounts of the entity.

## **5. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION AND UNCERTAINTY**

In the application of the aforementioned Company's accounting policies, the directors are required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the year in which the estimate is revised if the revision affects only that year, or in the year of the revision and future years if the revision affects both current and future years.

The following are the critical judgments, apart from those involving estimations, that the directors have made in the process of applying the Company's accounting policies and that have the most significant effect on the amounts recognized in the parent company only financial statements.

### **Revenue Recognition**

The Company recognizes revenue when the conditions described in Note 4 are satisfied. The Company also records a provision for estimated future returns and other allowances in the same period the related revenue is recorded. Provision for estimated sales returns and other allowances is generally made and adjusted based on historical experience and the consideration of varying contractual terms, and our management periodically reviews the adequacy of the estimation used.

### **Impairment of Tangible and Intangible Assets Other than Goodwill**

In the process of evaluating the potential impairment of tangible and intangible assets other than goodwill, the Company is required to make subjective judgments in determining the independent cash flows, useful lives, expected future revenue and expenses related to the specific asset groups with the consideration of the nature of semiconductor industry. Any changes in these estimates based on changed economic conditions or business strategies could result in significant impairment charges or reversal in future years.



## Impairment of Goodwill

The assessment of impairment of goodwill requires the Company to make subjective judgment to determine the identified cash-generating units, allocate the goodwill to relevant cash-generating units and estimate the recoverable amount of relevant cash-generating units.

## Impairment Assessment on Investment Using Equity Method

The Company assesses the impairment of investments accounted for using the equity method whenever triggering events or changes in circumstances indicate that an investment may be impaired and carrying value may not be recoverable. The Company measures the impairment based on a projected future cash flow of the investees, including the underlying assumptions of sales growth rate and capacity utilization rate formulated by such investees' internal management team. The Company also takes into account market conditions and the relevant industry trends to ensure the reasonableness of such assumptions.

## Realization of Deferred Income Tax Assets

Deferred tax assets are recognized to the extent that it is probable that future taxable profits will be available against which those deferred tax assets can be utilized. Assessment of the realization of the deferred tax assets requires the Company's subjective judgment and estimate, including the future revenue growth and profitability, tax holidays, the amount of tax credits can be utilized and feasible tax planning strategies. Any changes in the global economic environment, the industry trends and relevant laws and regulations could result in significant adjustments to the deferred tax assets.

## Valuation of Inventory

Inventories are stated at the lower of cost or net realizable value, and the Company uses judgment and estimate to determine the net realizable value of inventory at the end of each reporting period.

Due to the rapid technological changes, the Company estimates the net realizable value of inventory for obsolescence and unmarketable items at the end of reporting period and then writes down the cost of inventories to net realizable value. The net realizable value of the inventory is mainly determined based on assumptions of future demand within a specific time horizon.

## Recognition and Measurement of Defined Benefit Plans

Net defined benefit liability and the resulting defined benefit costs under defined benefit pension plans are calculated using the Projected Unit Credit Method. Actuarial assumptions comprise the discount rate, rate of employee turnover, and future salary increase rate. Changes in economic circumstances and market conditions will affect these assumptions and may have a material impact on the amount of the expense and the liability.

## 6. CASH AND CASH EQUIVALENTS

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Cash and deposits in banks	\$ 245,520,074	\$ 259,075,563
Repurchase agreements collateralized by corporate bonds	2,361,250	5,132,778
Commercial paper	1,997,239	-
Repurchase agreements collateralized by government bonds	<u>-</u>	<u>285,242</u>
	<u>\$ 249,878,563</u>	<u>\$ 264,493,583</u>

Deposits in banks consisted of highly liquid time deposits that were readily convertible to known amounts of cash and were subject to an insignificant risk of changes in value.

## 7. FINANCIAL ASSETS AND LIABILITIES AT FAIR VALUE THROUGH PROFIT OR LOSS

	December 31, 2016	December 31, 2015
<u>Financial assets</u>		
Held for trading		
Forward exchange contracts	\$ 140,094	\$ 6,026
Cross currency swap contracts	<u>10,976</u>	<u>-</u>
	<u>\$ 151,070</u>	<u>\$ 6,026</u>
<u>Financial liabilities</u>		
Held for trading		
Forward exchange contracts	<u>\$ 62,441</u>	<u>\$ 45,254</u>

The Company entered into derivative contracts to manage exposures due to fluctuations of foreign exchange rates. The derivative contracts entered into by the Company did not meet the criteria for hedge accounting. Therefore, the Company did not apply hedge accounting treatment for derivative contracts.

Outstanding forward exchange contracts consisted of the following:

	Maturity Date	Contract Amount (In Thousands)
<u>December 31, 2016</u>		
Sell NT\$/Buy EUR	January 2017	NT\$5,393,329/EUR159,400
Sell NT\$/Buy JPY	January 2017	NT\$7,314,841/JPY26,501,800
Sell US\$/Buy EUR	January 2017	US\$4,180/EUR4,000
Sell US\$/Buy NT\$	January 2017 to February 2017	US\$420,000/NT\$13,531,450
<u>December 31, 2015</u>		
Sell US\$/Buy JPY	January 2016	US\$126,944/JPY15,272,035
Sell US\$/Buy NT\$	January 2016	US\$430,000/NT\$14,106,892

Outstanding cross currency swap contracts consisted of the following:

Maturity Date	Contract Amount (In Thousands)	Range of Interest Rates Paid	Range of Interest Rates Received
<u>December 31, 2016</u>			
January 2017	US\$170,000/NT\$5,487,600	3.98%	-

## 8. HELD-TO-MATURITY FINANCIAL ASSETS

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Commercial paper	\$ 8,628,176	\$ -
Corporate bonds/Bank debentures	2,819,362	7,787,947
Structured product	<u>-</u>	<u>3,000,000</u>
	<u>\$ 11,447,538</u>	<u>\$ 10,787,947</u>
Current portion	\$ 11,447,538	\$ 9,166,523
Noncurrent portion	<u>-</u>	<u>1,621,424</u>
	<u>\$ 11,447,538</u>	<u>\$ 10,787,947</u>

## 9. NOTES AND ACCOUNTS RECEIVABLE, NET

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Notes and accounts receivable	\$ 40,492,727	\$ 26,119,625
Allowance for doubtful receivables	<u>(475,430)</u>	<u>(483,502)</u>
Notes and accounts receivable, net	<u>\$ 40,017,297</u>	<u>\$ 25,636,123</u>

In principle, the payment term granted to customers is due 30 days from the invoice date or 30 days from the end of the month of when the invoice is issued. The allowance for doubtful receivables is assessed by reference to the collectability of receivables by performing the account aging analysis, historical experience and current financial condition of customers.

Except for those impaired, for the rest of the notes and accounts receivable, the account aging analysis at the end of the reporting period is summarized in the following table. Notes and accounts receivable include amounts that are past due but for which the Company has not recognized a specific allowance for doubtful receivables after the assessment since there has not been a significant change in the credit quality of its customers and the amounts are still considered recoverable. In addition, the Company's subsidiary has obtained guarantee of NT\$5,559,960 thousand to certain receivables.

### Aging analysis of notes and accounts receivable, net

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Neither past due nor impaired	\$ 28,511,717	\$ 20,024,433
Past due but not impaired		
Past due within 30 days	6,755,262	5,611,690
Past due 31-60 days	1,693,463	-
Past due 61-120 days	<u>3,056,855</u>	<u>-</u>
	<u>\$ 40,017,297</u>	<u>\$ 25,636,123</u>

Movements of the allowance for doubtful receivables

	<b>Individually Assessed for Impairment</b>	<b>Collectively Assessed for Impairment</b>	<b>Total</b>
Balance at January 1, 2016	\$ 8,393	\$ 475,109	\$ 483,502
Provision	-	321	321
Reversal/Write-off	<u>(8,393)</u>	<u>-</u>	<u>(8,393)</u>
Balance at December 31, 2016	<u>\$ -</u>	<u>\$ 475,430</u>	<u>\$ 475,430</u>
Balance at January 1, 2015	\$ 8,093	\$ 475,409	\$ 483,502
Provision	300	4,803	5,103
Reversal/Write-off	<u>-</u>	<u>(5,103)</u>	<u>(5,103)</u>
Balance at December 31, 2015	<u>\$ 8,393</u>	<u>\$ 475,109</u>	<u>\$ 483,502</u>

Aging analysis of accounts receivable that is individually determined as impaired

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Past due over 121 days	<u>\$ -</u>	<u>\$ 8,393</u>

**10. INVENTORIES**

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Finished goods	\$ 8,324,267	\$ 7,733,331
Work in process	32,317,210	52,251,863
Raw materials	3,864,429	2,813,029
Supplies and spare parts	<u>1,998,440</u>	<u>1,539,965</u>
	<u>\$ 46,504,346</u>	<u>\$ 64,338,188</u>

Write-down of inventories to net realizable value (excluding earthquake losses) in the amount of NT\$1,508,452 thousand and NT\$466,825 thousand, respectively, were included in the cost of revenue for the years ended December 31, 2016 and 2015. Please refer to related earthquake losses in Note 34.

**11. INVESTMENTS ACCOUNTED FOR USING EQUITY METHOD**

Investments accounted for using the equity method consisted of the following:

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Subsidiaries	\$ 377,111,820	\$ 300,992,341
Associates	<u>19,743,888</u>	<u>23,373,251</u>
	<u>\$ 396,855,708</u>	<u>\$ 324,365,592</u>



a. Investments in subsidiaries

Subsidiaries consisted of the following:

Subsidiaries	Principal Activities	Place of Incorporation and Operation	Carrying Amount		% of Ownership and Voting Rights Held by the Company	
			December 31, 2016	December 31, 2015	December 31, 2016	December 31, 2015
TSMC Global Ltd. (TSMC Global)	Investment activities	Tortola, British Virgin Islands	\$ 265,634,729	\$ 203,425,723	100%	100%
TSMC Partners, Ltd. (TSMC Partners)	Investing in companies involved in the design, manufacture, and other related business in the semiconductor industry	Tortola, British Virgin Islands	51,749,910	50,827,318	100%	100%
TSMC China Company Limited (TSMC China)	Manufacturing and selling of integrated circuits at the order of and pursuant to product design specifications provided by customers	Shanghai, China	42,618,308	40,234,742	100%	100%
TSMC Nanjing Company Limited (TSMC Nanjing)	Manufacturing and selling of integrated circuits at the order of and pursuant to product design specifications provided by customers	Nanjing, China	6,331,094	-	100%	-
VisEra Technologies Company Ltd. (VisEra Tech)	Engaged in manufacturing electronic spare parts and in researching, developing, designing, manufacturing, selling, packaging and testing of color filter	Hsin-Chu, Taiwan	5,234,883	-	87%	-
TSMC North America	Selling and marketing of integrated circuits and semiconductor devices	San Jose, California, U.S.A.	4,340,303	4,234,685	100%	100%
VentureTech Alliance Fund II, L.P. (VTAF II)	Investing in new start-up technology companies	Cayman Islands	467,171	554,240	98%	98%
TSMC Europe B.V. (TSMC Europe)	Marketing and engineering supporting activities	Amsterdam, the Netherlands	353,695	330,664	100%	100%
VentureTech Alliance Fund III, L.P. (VTAF III)	Investing in new start-up technology companies	Cayman Islands	219,350	385,834	98%	98%
TSMC Japan Limited (TSMC Japan)	Marketing activities	Yokohama, Japan	132,999	127,453	100%	100%
TSMC Korea Limited (TSMC Korea)	Customer service and technical supporting activities	Seoul, Korea	35,706	35,231	100%	100%
TSMC Solar Europe GmbH	Selling of solar related products and providing customer service	Hamburg, Germany	(6,328)	1,186	100%	100%
Venture Tech Alliance Holdings, LLC (VTA Holdings)	Investing in new start-up technology companies	Delaware, U.S.A.	-	-	7%	-
Emerging Alliance Fund, L.P. (Emerging Alliance)	Investing in new start-up technology companies	Cayman Islands	-	440,901	-	99.5%
Chi Cherng Investment Co., Ltd.(Chi Cherng)	Investment activities	Taipei, Taiwan	-	394,364	-	100%
			<u>\$ 377,111,820</u>	<u>\$ 300,992,341</u>		

In August 2015, TSMC Solar Ltd. (TSMC Solar) ceased its manufacturing operations. TSMC Solar and TSMC Guang Neng Investment, Ltd. (TSMC GN) were incorporated into TSMC in December 2015. After the incorporation, TSMC Solar Europe GmbH, the subsidiary of TSMC Solar, is held directly by TSMC.

The Company acquired OmniVision Technologies, Inc.'s ("OVT's") 100% ownership in OVT Taiwan (changed to Chi Cherng) on November 20, 2015. As a result, the Company obtained control of OVT Taiwan. For more information on acquisition of subsidiary, please refer to Note 33 to the consolidated financial statements for the year ended December 31, 2016. In December 2016, Chi Cherng was incorporated into the Company.

To simplify investment structure, the Company acquired 253,120 thousand shares of VisEra Tech previously held by VisEra Holding Company (VisEra Holding) by NT\$4,874,231 thousand in August 2016. The percentage of ownership held by the Company was 87%.

Due to the expiration of the investment agreement between Emerging Alliance and the Company, Emerging Alliance completed the liquidation procedures in April 2016. Emerging Alliance's ownership in VTA Holdings is held directly by TSMC.

Under the investment agreement entered into with the municipal government of Nanjing, China on March 28, 2016, the Company and its subsidiaries will make an investment in Nanjing in the amount of approximately US\$3 billion to establish a subsidiary managing a 300mm wafer fab with the capacity of 20,000 12-inch wafers per month, and a design service center. TSMC Nanjing was established in May 2016. In 2016, the Company continually increased its investment in TSMC Nanjing for the amount of NT\$6,435,200 thousand. This project was approved by the Investment Commission, Ministry of Economic Affairs, R.O.C. (MOEA).

To lower the hedging cost, in both of 2016 and 2015, the Company continually increased its investment in TSMC Global for the amount of NT\$64,451,983 thousand and NT\$64,640,368 thousand, respectively. This project was approved by the Investment Commission, MOEA.

In January 2015, the Board of Directors of TSMC approved a sale of TSMC Solid State Lighting common shares of 565,480 thousand held by TSMC and TSMC GN to Epistar Corporation. The transaction was completed in February 2015.

b. Investments in associates

Associates consisted of the following:

Name of Associate	Principal Activities	Place of Incorporation and Operation	Carrying Amount		% of Ownership and Voting Rights Held by the Company	
			December 31, 2016	December 31, 2015	December 31, 2016	December 31, 2015
Vanguard International Semiconductor Corporation (VIS)	Research, design, development, manufacture, packaging, testing and sale of memory integrated circuits, LSI, VLSI and related parts	Hsinchu, Taiwan	\$ 8,806,384	\$ 8,446,054	28%	28%
Systems on Silicon Manufacturing Company Pte Ltd. (SSMC)	Fabrication and supply of integrated circuits	Singapore	7,163,516	9,511,515	39%	39%
Xintec Inc. (Xintec)	Wafer level chip size packaging service	Taoyuan, Taiwan	2,599,807	2,209,785	41%	35%
Global Unichip Corporation (GUC)	Researching, developing, manufacturing, testing and marketing of integrated circuits	Hsinchu, Taiwan	1,174,181	1,152,335	35%	35%
Motech Industries, Inc. (Motech)	Manufacturing and sales of solar cells, crystalline silicon solar cell, and test and measurement instruments and design and construction of solar power systems	New Taipei, Taiwan	-	2,053,562	-	12%
			<u>\$ 19,743,888</u>	<u>\$ 23,373,251</u>		

After TSMC Solar incorporated into the Company in December 2015, the Company directly owned 12% of the equity interest in Motech previously held by TSMC Solar. Starting June 2016, the Company has no longer served as Motech's board of director. As a result, the Company exercises no significant influence over Motech. Therefore, Motech is no longer accounted for using the equity method. Further, such investment was reclassified to available-for-sale financial assets and the Company recognized a disposal loss of NT\$259,960 thousand.

In March 2015, Xintec listed its shares on the R.O.C. Over-the-Counter (Taipei Exchange). Consequently, the Company's percentage of ownership over Xintec was diluted to approximately 35.4%. In April 2015, the Company sold 2,172 thousand common shares of Xintec and recognized a disposal gain of NT\$43,017 thousand. To simplify investment structure, the Company acquired 18,504 thousand shares of Xintec previously held by VisEra Holding by NT\$445,012 thousand in August 2016. The percentage of ownership held by the Company increased to 41.4%.

In the second quarter of 2015, the Company sold 82,000 thousand common shares of VIS and recognized a disposal gain of NT\$2,263,539 thousand. After the sale, the Company owned approximately 28.3% of the equity interest in VIS.

The summarized financial information in respect of each of the Company's material associates is set out below. The summarized financial information below represents amounts shown in the associate's financial statements prepared in accordance with the Accounting Standards Used in Preparation of the Parent Company Only Financial Statements, which is also adjusted by the Company using the equity method of accounting.

1) VIS

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Current assets	<u>\$ 25,662,921</u>	<u>\$ 24,800,749</u>
Noncurrent assets	<u>\$ 9,501,442</u>	<u>\$ 7,785,093</u>
Current liabilities	<u>\$ 5,476,672</u>	<u>\$ 4,262,001</u>
Noncurrent liabilities	<u>\$ 804,107</u>	<u>\$ 712,611</u>
	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Net revenue	<u>\$ 25,828,634</u>	<u>\$ 23,319,721</u>
Income from operations	<u>\$ 6,083,625</u>	<u>\$ 4,593,430</u>
Net income	<u>\$ 5,520,645</u>	<u>\$ 4,139,031</u>
Other comprehensive income (loss)	<u>\$ 5,592</u>	<u>\$ (61,886)</u>
Total comprehensive income	<u>\$ 5,526,237</u>	<u>\$ 4,077,145</u>
Cash dividends received	<u>\$ 1,206,981</u>	<u>\$ 1,206,414</u>

Reconciliation of the above summarized financial information to the carrying amount of the interest in the associate recognized in the parent company only balance sheets was as follows:

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Net assets	\$ 28,883,584	\$ 27,611,230
Percentage of ownership	28%	28%
The Company's share of net assets of the associate	<u>8,179,830</u>	<u>7,819,500</u>
Goodwill	<u>626,554</u>	<u>626,554</u>
Carrying amount of the investment	<u>\$ 8,806,384</u>	<u>\$ 8,446,054</u>

2) SSMC

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Current assets	<u>\$ 14,585,150</u>	<u>\$ 20,078,179</u>
Noncurrent assets	<u>\$ 5,360,076</u>	<u>\$ 6,144,263</u>
Current liabilities	<u>\$ 1,746,602</u>	<u>\$ 1,954,057</u>
Noncurrent liabilities	<u>\$ 286,340</u>	<u>\$ 303,217</u>

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Net revenue	<u>\$ 14,045,927</u>	<u>\$ 15,026,016</u>
Income from operations	<u>\$ 4,921,735</u>	<u>\$ 5,802,261</u>
Net income	<u>\$ 4,918,140</u>	<u>\$ 5,904,586</u>
Total comprehensive income	<u>\$ 4,918,140</u>	<u>\$ 5,904,586</u>
Cash dividends received	<u>\$ 4,076,170</u>	<u>\$ 1,556,592</u>

Reconciliation of the above summarized financial information to the carrying amount of the interest in the associate recognized in the parent company only balance sheets was as follows:

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Net assets	\$ 17,912,284	\$ 23,965,168
Percentage of ownership	39%	39%
The Company's share of net assets of the associate	6,948,175	9,296,089
Goodwill	213,984	213,984
Other adjustments	<u>1,357</u>	<u>1,442</u>
Carrying amount of the investment	<u>\$ 7,163,516</u>	<u>\$ 9,511,515</u>

Aggregate information of associates that are not individually material was summarized as follows:

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
The Company's share of profits of associates	<u>\$ 42,457</u>	<u>\$ 219,007</u>
The Company's share of other comprehensive loss of associates	<u>\$ (17,777)</u>	<u>\$ (855)</u>
The Company's share of total comprehensive income of associates	<u>\$ 24,680</u>	<u>\$ 218,152</u>

The market prices of the investments accounted for using the equity method in publicly traded stocks calculated by the closing price at the end of the reporting period are summarized as follows. The closing price represents the quoted price in active markets, the level 1 fair value measurement.

<b>Name of Associate</b>	<b>December 31, 2016</b>	<b>December 31, 2015</b>
VIS	<u>\$ 26,089,360</u>	<u>\$ 19,868,766</u>
GUC	<u>\$ 3,664,997</u>	<u>\$ 3,081,399</u>
Xintec	<u>\$ 3,622,227</u>	<u>\$ 3,006,017</u>
Motech		<u>\$ 2,636,054</u>

## 12. PROPERTY, PLANT AND EQUIPMENT

	Land	Buildings	Machinery and Equipment	Office Equipment	Equipment under Installation and Construction in Progress	Total
<u>Cost</u>						
Balance at January 1, 2016	\$ 3,212,000	\$ 272,949,721	\$ 1,807,955,631	\$ 27,809,576	\$ 191,052,758	\$ 2,302,979,686
Additions	-	9,000,012	155,226,807	4,264,166	193,144,768	361,635,753
Disposals or retirements	-	(13,321)	(2,724,958)	(243,085)	-	(2,981,364)
Balance at December 31, 2016	<u>\$ 3,212,000</u>	<u>\$ 281,936,412</u>	<u>\$ 1,960,457,480</u>	<u>\$ 31,830,657</u>	<u>\$ 384,197,526</u>	<u>\$ 2,661,634,075</u>
<u>Accumulated depreciation</u>						
Balance at January 1, 2016	\$ -	\$ 140,493,396	\$ 1,313,095,298	\$ 17,606,080	\$ -	\$ 1,471,194,774
Additions	-	16,368,395	193,655,507	3,953,422	-	213,977,324
Disposals or retirements	-	(7,278)	(2,688,997)	(243,085)	-	(2,939,360)
Balance at December 31, 2016	<u>\$ -</u>	<u>\$ 156,854,513</u>	<u>\$ 1,504,061,808</u>	<u>\$ 21,316,417</u>	<u>\$ -</u>	<u>\$ 1,682,232,738</u>
Carrying amounts at December 31, 2016	<u>\$ 3,212,000</u>	<u>\$ 125,081,899</u>	<u>\$ 456,395,672</u>	<u>\$ 10,514,240</u>	<u>\$ 384,197,526</u>	<u>\$ 979,401,337</u>
<u>Cost</u>						
Balance at January 1, 2015	\$ 3,212,000	\$ 244,902,026	\$ 1,676,843,858	\$ 25,494,170	\$ 105,716,759	\$ 2,056,168,813
Additions	-	26,671,505	133,048,817	2,958,321	85,335,999	248,014,642
Disposals or retirements	-	(74,721)	(2,109,856)	(675,443)	-	(2,860,020)
Effect of merger of subsidiary	-	1,450,911	172,812	32,528	-	1,656,251
Balance at December 31, 2015	<u>\$ 3,212,000</u>	<u>\$ 272,949,721</u>	<u>\$ 1,807,955,631</u>	<u>\$ 27,809,576</u>	<u>\$ 191,052,758</u>	<u>\$ 2,302,979,686</u>
<u>Accumulated depreciation and impairment</u>						
Balance at January 1, 2015	\$ -	\$ 124,864,919	\$ 1,119,908,770	\$ 14,710,763	\$ -	\$ 1,259,484,452
Additions	-	15,032,971	194,722,607	3,538,232	-	213,293,810
Disposals or retirements	-	(73,855)	(1,936,928)	(675,443)	-	(2,686,226)
Impairment	-	-	228,037	-	-	228,037
Effect of merger of subsidiary	-	669,361	172,812	32,528	-	874,701
Balance at December 31, 2015	<u>\$ -</u>	<u>\$ 140,493,396</u>	<u>\$ 1,313,095,298</u>	<u>\$ 17,606,080</u>	<u>\$ -</u>	<u>\$ 1,471,194,774</u>
Carrying amounts at December 31, 2015	<u>\$ 3,212,000</u>	<u>\$ 132,456,325</u>	<u>\$ 494,860,333</u>	<u>\$ 10,203,496</u>	<u>\$ 191,052,758</u>	<u>\$ 831,784,912</u>

The significant part of the Company's buildings includes main plants, mechanical and electrical power equipment and clean rooms, and the related depreciation is calculated using the estimated useful lives of 20 years, 10 years and 10 years, respectively.

For the year ended December 31, 2015, the Company recognized an impairment loss of NT\$228,037 thousand under foundry segment since the carrying amount of some of property, plant and equipment was expected to be unrecoverable. Such impairment loss was included in other operating income and expenses.

## 13. INTANGIBLE ASSETS

	Goodwill	Technology License Fees	Software and System Design Costs	Patent and Others	Total
<u>Cost</u>					
Balance at January 1, 2016	\$ 1,567,756	\$ 8,399,059	\$ 19,297,534	\$ 4,722,667	\$ 33,987,016
Additions	-	1,091,261	2,770,842	518,536	4,380,639
Retirements	-	-	(4,787)	-	(4,787)
Balance at December 31, 2016	<u>\$ 1,567,756</u>	<u>\$ 9,490,320</u>	<u>\$ 22,063,589</u>	<u>\$ 5,241,203</u>	<u>\$ 38,362,868</u>
<u>Accumulated amortization</u>					
Balance at January 1, 2016	\$ -	\$ 4,724,143	\$ 16,279,451	\$ 3,592,004	\$ 24,595,598
Additions	-	1,367,370	1,716,836	639,860	3,724,066
Retirements	-	-	(4,787)	-	(4,787)
Balance at December 31, 2016	<u>\$ -</u>	<u>\$ 6,091,513</u>	<u>\$ 17,991,500</u>	<u>\$ 4,231,864</u>	<u>\$ 28,314,877</u>
Carrying amounts at December 31, 2016	<u>\$ 1,567,756</u>	<u>\$ 3,398,807</u>	<u>\$ 4,072,089</u>	<u>\$ 1,009,339</u>	<u>\$ 10,047,991</u>

(Continued)



	<b>Goodwill</b>	<b>Technology License Fees</b>	<b>Software and System Design Costs</b>	<b>Patent and Others</b>	<b>Total</b>
<u>Cost</u>					
Balance at January 1, 2015	\$ 1,567,756	\$ 6,093,450	\$ 18,532,060	\$ 4,136,156	\$ 30,329,422
Additions	-	2,112,572	854,962	586,511	3,554,045
Retirements	-	-	(101,218)	-	(101,218)
Effect of merger of subsidiary	-	193,037	11,730	-	204,767
Balance at December 31, 2015	<u>\$ 1,567,756</u>	<u>\$ 8,399,059</u>	<u>\$ 19,297,534</u>	<u>\$ 4,722,667</u>	<u>\$ 33,987,016</u>
<u>Accumulated amortization</u>					
Balance at January 1, 2015	\$ -	\$ 3,605,977	\$ 14,706,168	\$ 3,020,467	\$ 21,332,612
Additions	-	925,129	1,662,771	571,537	3,159,437
Retirements	-	-	(101,218)	-	(101,218)
Effect of merger of subsidiary	-	193,037	11,730	-	204,767
Balance at December 31, 2015	<u>\$ -</u>	<u>\$ 4,724,143</u>	<u>\$ 16,279,451</u>	<u>\$ 3,592,004</u>	<u>\$ 24,595,598</u>
Carrying amounts at December 31, 2015	<u>\$ 1,567,756</u>	<u>\$ 3,674,916</u>	<u>\$ 3,018,083</u>	<u>\$ 1,130,663</u>	<u>\$ 9,391,418</u>

(Concluded)

The Company's goodwill has been tested for impairment at the end of the annual reporting period and the recoverable amount is determined based on the value in use. The value in use was calculated based on the cash flow forecast from the financial budgets covering the future five-year period, and the Company used annual discount rate of 8.40% in its test of impairment for both December 31, 2016 and 2015 to reflect the relevant specific risk in the cash-generating unit.

For the years ended December 31, 2016 and 2015, the Company did not recognize any impairment loss on goodwill.

#### 14. OTHER ASSETS

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Tax receivable	\$ 2,182,159	\$ 1,875,772
Prepaid expenses	821,648	1,185,194
Long-term receivable	-	360,000
Others	<u>855</u>	<u>165</u>
	<u>\$ 3,004,662</u>	<u>\$ 3,421,131</u>
Current portion	\$ 3,004,662	\$ 3,061,131
Noncurrent portion	<u>-</u>	<u>360,000</u>
	<u>\$ 3,004,662</u>	<u>\$ 3,421,131</u>

## 15. SHORT-TERM LOANS

	December 31, 2016	December 31, 2015
Unsecured loans		
Amount	\$ 57,958,200	\$ 39,474,000
Original loan content		
US\$ (in thousands)	\$ 1,800,000	\$ 1,200,000
Annual interest rate	0.87%-1.07%	0.50%-0.77%
Maturity date	Due by January 2017	Due by February 2016

## 16. PROVISIONS

	December 31, 2016	December 31, 2015
Sales returns and allowances	\$ 16,991,612	\$ 9,011,863
Warranties	<u>28,187</u>	<u>46,304</u>
	<u>\$ 17,019,799</u>	<u>\$ 9,058,167</u>
Current portion	\$ 16,991,612	\$ 9,011,863
Noncurrent portion (classified under other noncurrent liabilities)	<u>28,187</u>	<u>46,304</u>
	<u>\$ 17,019,799</u>	<u>\$ 9,058,167</u>

	Sales Returns and Allowances	Warranties	Total
<u>Year ended December 31, 2016</u>			
Balance, beginning of year	\$ 9,011,863	\$ 46,304	\$ 9,058,167
Provision (Reversal)	35,699,912	(13,629)	35,686,283
Payment	<u>(27,720,163)</u>	<u>(4,488)</u>	<u>(27,724,651)</u>
Balance, end of year	<u>\$ 16,991,612</u>	<u>\$ 28,187</u>	<u>\$ 17,019,799</u>
<u>Year ended December 31, 2015</u>			
Balance, beginning of year	\$ 9,959,817	\$ -	\$ 9,959,817
Provision (Reversal)	16,811,021	(222)	16,810,799
Payment	(17,758,975)	-	(17,758,975)
Effect of merger of subsidiary	<u>-</u>	<u>46,526</u>	<u>46,526</u>
Balance, end of year	<u>\$ 9,011,863</u>	<u>\$ 46,304</u>	<u>\$ 9,058,167</u>

Provisions for sales returns and allowances are estimated based on historical experience, management judgment, and any known factors that would significantly affect the returns and allowances, and are recognized as a reduction of revenue in the same year of the related product sales.

The provision for warranties represents the present value of the Company's best estimate of the future outflow of the economic benefits that will be required under the Company's obligations for warranties. The best estimate has been made on the basis of historical warranty trends of business.

## 17. BONDS PAYABLE

	December 31, 2016	December 31, 2015
Domestic unsecured bonds	\$ 154,200,000	\$ 166,200,000
Less: Current portion	<u>(38,100,000)</u>	<u>(12,000,000)</u>
	<u>\$ 116,100,000</u>	<u>\$ 154,200,000</u>

The major terms of domestic unsecured bonds are as follows:

Issuance	Tranche	Issuance Period	Total Amount	Coupon Rate	Repayment and Interest Payment
100-1	A	September 2011 to September 2016	\$ 10,500,000	1.40%	Bullet repayment; interest payable annually
	B	September 2011 to September 2018	7,500,000	1.63%	The same as above
100-2	A	January 2012 to January 2017	10,000,000	1.29%	The same as above
	B	January 2012 to January 2019	7,000,000	1.46%	The same as above
101-1	A	August 2012 to August 2017	9,900,000	1.28%	The same as above
	B	August 2012 to August 2019	9,000,000	1.40%	The same as above
101-2	A	September 2012 to September 2017	12,700,000	1.28%	The same as above
	B	September 2012 to September 2019	9,000,000	1.39%	The same as above
101-3	-	October 2012 to October 2022	4,400,000	1.53%	The same as above
101-4	A	January 2013 to January 2018	10,600,000	1.23%	The same as above
	B	January 2013 to January 2020	10,000,000	1.35%	The same as above
	C	January 2013 to January 2023	3,000,000	1.49%	The same as above
102-1	A	February 2013 to February 2018	6,200,000	1.23%	The same as above
	B	February 2013 to February 2020	11,600,000	1.38%	The same as above
	C	February 2013 to February 2023	3,600,000	1.50%	The same as above
102-2	A	July 2013 to July 2020	10,200,000	1.50%	The same as above
	B	July 2013 to July 2023	3,500,000	1.70%	The same as above

(Continued)

Issuance	Tranche	Issuance Period	Total Amount	Coupon Rate	Repayment and Interest Payment
102-3	A	August 2013 to August 2017	\$ 4,000,000	1.34%	Bullet repayment; interest payable annually
	B	August 2013 to August 2019	8,500,000	1.52%	The same as above
102-4	A	September 2013 to September 2016	1,500,000	1.35%	The same as above
	B	September 2013 to September 2017	1,500,000	1.45%	The same as above
	C	September 2013 to March 2019	1,400,000	1.60%	Bullet repayment; interest payable annually (interest for the six months prior to maturity will accrue on the basis of actual days and be repayable at maturity)
	D	September 2013 to March 2021	2,600,000	1.85%	The same as above
	E	September 2013 to March 2023	5,400,000	2.05%	The same as above
	F	September 2013 to September 2023	2,600,000	2.10%	Bullet repayment; interest payable annually

(Concluded)

## 18. RETIREMENT BENEFIT PLANS

### a. Defined contribution plans

The plan under the R.O.C. Labor Pension Act (the “Act”) is deemed a defined contribution plan. Pursuant to the Act, the Company has made monthly contributions equal to 6% of each employee’s monthly salary to employees’ pension accounts. Accordingly, the Company recognized expenses of NT\$1,735,492 thousand and NT\$1,622,375 thousand in the parent company only statements of comprehensive income for the years ended December 31, 2016 and 2015, respectively.

### b. Defined benefit plans

The Company has defined benefit plans under the R.O.C. Labor Standards Law that provide benefits based on an employee’s length of service and average monthly salary for the six-month period prior to retirement. The Company contributes an amount equal to 2% of salaries paid each month to their respective pension funds (the Funds), which are administered by the Labor Pension Fund Supervisory Committee (the Committee) and deposited in the Committee’s name in the Bank of Taiwan. Before the end of each year, the Company assesses the balance in the Funds. If the amount of the balance in the Funds is inadequate to pay retirement benefits for employees who conform to retirement requirements in the next year, the Company is required to fund the difference in one appropriation that should be made before the end of March of the next year. The Funds are operated and managed by the government’s designated authorities; as such, the Company does not have any right to intervene in the investments of the Funds.

Amounts recognized in the parent company only statements of comprehensive income in respect of these defined benefit plans were as follows:

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Current service cost	\$ 132,786	\$ 149,216
Net interest expense	<u>139,355</u>	<u>144,754</u>
Components of defined benefit costs recognized in profit or loss	<u>272,141</u>	<u>293,970</u>
Remeasurement on the net defined benefit liability:		
Return on plan assets (excluding amounts included in net interest expense)	45,721	(13,707)
Actuarial loss arising from experience adjustments	38,195	297,077
Actuarial loss arising from changes in financial assumptions	694,632	544,333
Actuarial loss arising from changes in demographic assumptions	<u>278,672</u>	<u>-</u>
Components of defined benefit costs recognized in other comprehensive income	<u>1,057,220</u>	<u>827,703</u>
Total	<u>\$ 1,329,361</u>	<u>\$ 1,121,673</u>

The pension costs of the aforementioned defined benefit plans were recognized in profit or loss by the following categories:

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Cost of revenue	\$ 176,977	\$ 188,761
Research and development expenses	73,395	81,203
General and administrative expenses	17,367	19,091
Marketing expenses	<u>4,402</u>	<u>4,915</u>
	<u>\$ 272,141</u>	<u>\$ 293,970</u>

The amounts arising from the defined benefit obligation of the Company in the parent company only balance sheets were as follows:

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Present value of defined benefit obligation	\$ 12,480,480	\$ 11,318,174
Fair value of plan assets	<u>(3,929,072)</u>	<u>(3,870,148)</u>
Net defined benefit liability	<u>\$ 8,551,408</u>	<u>\$ 7,448,026</u>



Movements in the present value of the defined benefit obligation were as follows:

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Balance, beginning of year	\$ 11,318,174	\$ 10,236,262
Current service cost	132,786	149,216
Interest expense	212,909	228,444
Remeasurement losses:		
Actuarial loss arising from experience adjustments	38,195	297,077
Actuarial loss arising from changes in financial assumptions	694,632	544,333
Actuarial loss arising from changes in demographic assumptions	278,672	-
Benefits paid from plan assets	(194,888)	(146,136)
Effect of merger of subsidiary	-	8,978
Balance, end of year	<u>\$ 12,480,480</u>	<u>\$ 11,318,174</u>

Movements in the fair value of the plan assets were as follows:

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Balance, beginning of year	\$ 3,870,148	\$ 3,689,413
Interest income	73,554	83,690
Remeasurement gains (losses):		
Return on plan assets (excluding amounts included in net interest expense)	(45,721)	13,707
Contributions from employer	225,979	220,496
Benefits paid from plan assets	(194,888)	(146,136)
Effect of merger of subsidiary	-	8,978
Balance, end of year	<u>\$ 3,929,072</u>	<u>\$ 3,870,148</u>

The fair value of the plan assets by major categories at the end of reporting period was as follows:

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Cash	\$ 818,426	\$ 690,821
Equity instruments	1,852,950	2,070,142
Debt instruments	<u>1,257,696</u>	<u>1,109,185</u>
	<u>\$ 3,929,072</u>	<u>\$ 3,870,148</u>

The actuarial valuations of the present value of the defined benefit obligation were carried out by qualified actuaries. The principal assumptions of the actuarial valuation were as follows:

	<b>Measurement Date</b>	
	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Discount rate	1.50%	1.90%
Future salary increase rate	3.00%	3.00%

Through the defined benefit plans under the R.O.C. Labor Standards Law, the Company is exposed to the following risks:

- 1) Investment risk: The pension funds are invested in equity and debt securities, bank deposits, etc. The investment is conducted at the discretion of the government's designated authorities or under the mandated management. However, under the R.O.C. Labor Standards Law, the rate of return on assets shall not be less than the average interest rate on a two-year time deposit published by the local banks and the government is responsible for any shortfall in the event that the rate of return is less than the required rate of return.
- 2) Interest risk: A decrease in the government bond interest rate will increase the present value of the defined benefit obligation; however, this will be partially offset by an increase in the return on the debt investments of the plan assets.

Assuming a hypothetical decrease in interest rate at the end of the reporting period contributed to a decrease of 0.5% in the discount rate and all other assumptions were held constant, the present value of the defined benefit obligation would increase by NT\$970,282 thousand and NT\$844,058 thousand as of December 31, 2016 and 2015, respectively.

- 3) Salary risk: The present value of the defined benefit obligation is calculated by reference to the future salaries of plan participants. As such, an increase in the salary of the plan participants will increase the present value of the defined benefit obligation.

Assuming the expected salary rate increases by 0.5% at the end of the reporting period and all other assumptions were held constant, the present value of the defined benefit obligation would increase by NT\$951,424 thousand and NT\$830,699 thousand as of December 31, 2016 and 2015, respectively.

The sensitivity analysis presented above may not be representative of the actual change in the defined benefit obligation as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

Furthermore, in presenting the above sensitivity analysis, the present value of the defined benefit obligation has been calculated using the projected unit credit method at the end of the reporting period, which is the same as that applied in calculating the defined benefit obligation liability recognized in the parent company only balance sheets.

The Company expects to make contributions of NT\$232,759 thousand to the defined benefit plans in the next year starting from December 31, 2016. The weighted average duration of the defined benefit obligation is 14 years.

## 19. GUARANTEE DEPOSITS

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Capacity guarantee	\$ 20,929,350	\$ 27,549,563
Others	<u>176,992</u>	<u>172,624</u>
	<u>\$ 21,106,342</u>	<u>\$ 27,722,187</u>
Current portion (classified under accrued expenses and other current liabilities)	\$ 6,439,800	\$ 6,167,813
Noncurrent portion	<u>14,666,542</u>	<u>21,554,374</u>
	<u>\$ 21,106,342</u>	<u>\$ 27,722,187</u>

Some of guarantee deposits were refunded to customers by offsetting related accounts receivable.

## 20. EQUITY

### a. Capital stock

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Authorized shares (in thousands)	<u>28,050,000</u>	<u>28,050,000</u>
Authorized capital	<u>\$ 280,500,000</u>	<u>\$ 280,500,000</u>
Issued and paid shares (in thousands)	<u>25,930,380</u>	<u>25,930,380</u>
Issued capital	<u>\$ 259,303,805</u>	<u>\$ 259,303,805</u>

A holder of issued common shares with par value of NT\$10 per share is entitled to vote and to receive dividends.

The authorized shares include 500,000 thousand shares allocated for the exercise of employee stock options.

As of December 31, 2016, 1,072,194 thousand ADSs of the Company were traded on the NYSE. The number of common shares represented by the ADSs was 5,360,968 thousand shares (one ADS represents five common shares).

### b. Capital surplus

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Additional paid-in capital	\$ 24,184,939	\$ 24,184,939
From merger	22,804,510	22,804,510
From convertible bonds	8,892,847	8,892,847
From share of changes in equities of subsidiaries	107,798	100,761
From share of changes in equities of associates	282,155	317,103
Donations	<u>55</u>	<u>55</u>
	<u>\$ 56,272,304</u>	<u>\$ 56,300,215</u>

Under the relevant laws, the capital surplus generated from donations and the excess of the issuance price over the par value of capital stock (including the stock issued for new capital, mergers and convertible bonds) may be used to offset a deficit; in addition, when the Company has no deficit, such capital surplus may be distributed as cash dividends or stock dividends up to a certain percentage of the Company's paid-in capital. The capital surplus from share of changes in equities of subsidiaries and associates may be used to offset a deficit.

### c. Retained earnings and dividend policy

In accordance with the amendments to the R.O.C. Company Act in May 2015, the recipients of dividends and bonuses are limited to shareholders and do not include employees. The amendments to the Company's Articles of Incorporation on profits distribution policy had been approved by the Company's shareholders in its meeting held on June 7, 2016. For policy about the profit sharing bonus to employees, please refer to Note 28.

The Company's amended Articles of Incorporation provide that, when allocating the net profits for each fiscal year, the Company shall first offset its losses in previous years and then set aside the following items accordingly:

- 1) Legal capital reserve at 10% of the profits left over, until the accumulated legal capital reserve equals the Company's paid-in capital;
- 2) Special capital reserve in accordance with relevant laws or regulations or as requested by the authorities in charge;
- 3) Any balance left over shall be allocated according to the resolution of the shareholders' meeting.

The Company's Articles of Incorporation also provide that profits of the Company may be distributed by way of cash dividend and/or stock dividend. However, distribution of profits shall be made preferably by way of cash dividend. Distribution of profits may also be made by way of stock dividend; provided that the ratio for stock dividend shall not exceed 50% of the total distribution.

Any appropriations of the profits are subject to shareholders' approval in the following year.

The appropriation for legal capital reserve shall be made until the reserve equals the Company's paid-in capital. The reserve may be used to offset a deficit, or be distributed as dividends in cash or stocks for the portion in excess of 25% of the paid-in capital if the Company incurs no loss.

Pursuant to existing regulations, the Company is required to set aside additional special capital reserve equivalent to the net debit balance of the other components of stockholders' equity, such as the accumulated balance of foreign currency translation reserve, unrealized valuation gain/loss from available-for-sale financial assets, gain/loss from changes in fair value of hedging instruments in cash flow hedges, etc. For the subsequent decrease in the deduction amount to stockholders' equity, any special reserve appropriated may be reversed to the extent that the net debit balance reverses.

The appropriations of 2015 and 2014 earnings have been approved by the Company's shareholders in its meetings held on June 7, 2016 and on June 9, 2015, respectively. The appropriations and dividends per share were as follows:

	<u>Appropriation of Earnings</u>		<u>Dividends Per Share (NT\$)</u>	
	<u>For Fiscal Year 2015</u>	<u>For Fiscal Year 2014</u>	<u>For Fiscal Year 2015</u>	<u>For Fiscal Year 2014</u>
Legal capital reserve	\$ 30,657,384	\$ 26,389,879		
Cash dividends to shareholders	<u>155,582,283</u>	<u>116,683,481</u>	\$6.0	\$4.5
	<u>\$ 186,239,667</u>	<u>\$ 143,073,360</u>		

The Company's appropriations of earnings for 2016 had been approved in the meeting of the Board of Directors held on February 14, 2017. The appropriations and dividends per share were as follows:

	<u>Appropriation of Earnings</u>	<u>Dividends Per Share (NT\$)</u>
	<u>For Fiscal Year 2016</u>	<u>For Fiscal Year 2016</u>
Legal capital reserve	\$ 33,424,718	
Cash dividends to shareholders	<u>181,512,663</u>	\$ 7.0
	<u>\$ 214,937,381</u>	

The appropriations of earnings for 2016 are to be presented for approval in the Company's shareholders' meeting to be held on June 8, 2017 (expected).

Under the Integrated Income Tax System that became effective on January 1, 1998, the R.O.C. resident shareholders are allowed a tax credit for their proportionate share of the income tax paid by the Company on earnings generated since January 1, 1998.

d. Others

Changes in others were as follows:

	<b>Year Ended December 31, 2016</b>			
	<b>Foreign Currency Translation Reserve</b>	<b>Unrealized Gain/Loss from Available-for- sale Financial Assets</b>	<b>Cash Flow Hedges Reserve</b>	<b>Total</b>
Balance, beginning of year	\$ 11,039,949	\$ 734,771	\$ (607)	\$ 11,774,113
Exchange differences arising on translation of foreign operations	(9,439,776)	-	-	(9,439,776)
Changes in fair value of available-for-sale financial assets	-	148,917	-	148,917
Cumulative gain reclassified to profit or loss upon disposal of available-for-sale financial assets	-	(101,411)	-	(101,411)
Share of other comprehensive income of subsidiaries and associates	65,776	(714,991)	712	(648,503)
The proportionate share of other comprehensive income/losses reclassified to profit or loss upon partial disposal of associates	(4,712)	(3,469)	-	(8,181)
Income tax effect	-	(61,176)	-	(61,176)
Balance, end of year	<u>\$ 1,661,237</u>	<u>\$ 2,641</u>	<u>\$ 105</u>	<u>\$ 1,663,983</u>
	<b>Year Ended December 31, 2015</b>			
	<b>Foreign Currency Translation Reserve</b>	<b>Unrealized Gain/Loss from Available-for- sale Financial Assets</b>	<b>Cash Flow Hedges Reserve</b>	<b>Total</b>
Balance, beginning of year	\$ 4,502,113	\$ 21,247,483	\$ (305)	\$ 25,749,291
Exchange differences arising on translation of foreign operations	6,525,608	-	-	6,525,608
Changes in fair value of available-for-sale financial assets	-	94,115	-	94,115

(Continued)



	<b>Year Ended December 31, 2015</b>			
	<b>Foreign Currency Translation Reserve</b>	<b>Unrealized Gain/Loss from Available-for- sale Financial Assets</b>	<b>Cash Flow Hedges Reserve</b>	<b>Total</b>
Cumulative gain reclassified to profit or loss upon disposal of available-for-sale financial assets	\$ -	\$ (51)	\$ -	\$ (51)
Share of other comprehensive income of subsidiaries and associates	9,102	(20,592,836)	(313)	(20,584,047)
The proportionate share of other comprehensive income/losses reclassified to profit or loss upon partial disposal of associates	3,126	2,051	11	5,188
Income tax effect	<u>-</u>	<u>(15,991)</u>	<u>-</u>	<u>(15,991)</u>
Balance, end of year	<u>\$ 11,039,949</u>	<u>\$ 734,771</u>	<u>\$ (607)</u>	<u>\$ 11,774,113</u> (Concluded)

The exchange differences arising on translation of foreign operation's net assets from its functional currency to the Company's presentation currency are recognized directly in other comprehensive income and also accumulated in the foreign currency translation reserve.

Unrealized gain/loss on available-for-sale financial assets represents the cumulative gains or losses arising from the fair value measurement on available-for-sale financial assets that are recognized in other comprehensive income. When those available-for-sale financial assets have been disposed of or are determined to be impaired subsequently, the related cumulative gains or losses in other comprehensive income are reclassified to profit or loss.

The cash flow hedges reserve represents the cumulative effective portion of gains or losses arising on changes in fair value of the hedging instruments entered into as cash flow hedges. The cumulative gains or losses arising on changes in fair value of the hedging instruments that are recognized and accumulated in cash flow hedges reserve will be reclassified to profit or loss only when the hedge transaction affects profit or loss.

## **21. SHARE-BASED PAYMENT**

The Company's Employee Stock Option Plans, consisting of the TSMC 2004 Plan, TSMC 2003 Plan and TSMC 2002 Plan, were approved by the Securities and Futures Bureau on January 6, 2005, October 29, 2003 and June 25, 2002, respectively. The maximum number of stock options authorized to be granted under the TSMC 2004 Plan, TSMC 2003 Plan and TSMC 2002 Plan was 11,000 thousand, 120,000 thousand and 100,000 thousand, respectively, with each stock option eligible to subscribe for one common share of the Company when exercised. The stock options may be granted to qualified employees of the Company or any of its domestic or foreign subsidiaries, in which the Company's shareholding with voting rights, directly or indirectly, is more than fifty percent (50%). The stock options of all the plans are valid for ten years and exercisable at certain percentages subsequent to the second anniversary of the grant date. Under the terms of the plans, the stock options are granted at an exercise price equal to the closing price of the Company's common shares quoted on the TWSE on the grant date.

The Company did not issue employee stock option plans for years ended December 31, 2016 and 2015. Information about the Company's outstanding employee stock options is described as follows:

	<b>Number of Stock Options (In Thousands)</b>	<b>Weighted- average Exercise Price (NT\$)</b>
<u>Year ended December 31, 2015</u>		
Balance, beginning of year	718	\$47.2
Options exercised	<u>(718)</u>	47.2
Balance, end of year	<u>      -</u>	-
Balance exercisable, end of year	<u>      -</u>	-

The numbers of outstanding stock options and exercise prices have been adjusted to reflect the distribution of earnings by the Company in accordance with the plans.

The employee stock options have been fully exercised in the second quarter of 2015.

## 22. NET REVENUE

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Net revenue from sale of goods	\$ 935,864,491	\$ 836,546,605
Net revenue from royalties	<u>522,800</u>	<u>500,283</u>
	<u>\$ 936,387,291</u>	<u>\$ 837,046,888</u>

## 23. OTHER INCOME

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Interest income		
Bank deposits	\$ 1,634,873	\$ 1,655,118
Held-to-maturity financial assets	<u>48,277</u>	<u>71,385</u>
	1,683,150	1,726,503
Dividend income	<u>133,653</u>	<u>113,359</u>
	<u>\$ 1,816,803</u>	<u>\$ 1,839,862</u>

## 24. FINANCE COSTS

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Interest expense		
Corporate bonds	\$ 2,353,251	\$ 2,367,179
Bank loans	<u>289,942</u>	<u>73,280</u>
	<u>\$ 2,643,193</u>	<u>\$ 2,440,459</u>

## 25. OTHER GAINS AND LOSSES

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Gain on disposal of financial assets, net		
Available-for-sale financial assets	\$ 101,411	\$ 51
Other gains	125,282	123,920
Net gain (loss) on financial instruments at FVTPL		
Held for trading	899,991	(1,719,106)
Designated as at FVTPL	(76,691)	-
Gain (loss) on disposal of investments accounted for using equity method, net	(296,065)	2,419,785
Impairment loss of financial assets		
Financial assets carried at cost	(4,537)	(21,437)
Other losses	<u>(15,291)</u>	<u>(15,228)</u>
	<u>\$ 734,100</u>	<u>\$ 787,985</u>

## 26. INCOME TAX

### a. Income tax expense recognized in profit or loss

Income tax expense consisted of the following:

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Current income tax expense		
Current tax expense recognized in the current year	\$ 53,577,418	\$ 45,633,743
Income tax adjustments on prior years	(1,039,175)	(979,196)
Other income tax adjustments	<u>168,040</u>	<u>142,426</u>
	<u>52,706,283</u>	<u>44,796,973</u>
Deferred income tax benefit		
The origination and reversal of temporary differences	<u>(1,764,503)</u>	<u>(1,382,142)</u>
Income tax expense recognized in profit or loss	<u>\$ 50,941,780</u>	<u>\$ 43,414,831</u>

A reconciliation of income before income tax and income tax expense recognized in profit or loss was as follows:

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Income before tax	<u>\$ 385,188,960</u>	<u>\$ 349,988,668</u>
Income tax expense at the statutory rate (17%)	\$ 65,482,123	\$ 59,498,074
Tax effect of adjusting items:		
Nondeductible (deductible) items in determining taxable income	121,152	(6,011,617)
Tax-exempt income	(19,075,801)	(21,760,175)
Additional income tax under the Alternative Minimum Tax Act	-	6,041,603
		(Continued)

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Additional income tax on unappropriated earnings	\$ 11,957,213	\$ 12,103,200
The origination and reversal of temporary differences	(1,764,503)	(1,382,142)
Income tax credits	<u>(4,907,269)</u>	<u>(4,237,342)</u>
	51,812,915	44,251,601
Income tax adjustments on prior years	(1,039,175)	(979,196)
Other income tax adjustments	<u>168,040</u>	<u>142,426</u>
Income tax expense recognized in profit or loss	<u>\$ 50,941,780</u>	<u>\$ 43,414,831</u> (Concluded)

b. Income tax expense recognized in other comprehensive income

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Deferred income tax benefit (expense)		
Related to remeasurement of defined benefit obligation	\$ 126,867	\$ 99,324
Related to unrealized gain/loss on available-for-sale financial assets	<u>(61,176)</u>	<u>(15,991)</u>
	<u>\$ 65,691</u>	<u>\$ 83,333</u>

c. Deferred income tax balance

The analysis of deferred income tax assets and liabilities in the parent company only balance sheets was as follows:

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Deferred income tax assets		
Temporary differences		
Depreciation	\$ 3,284,735	\$ 1,874,632
Provision for sales returns and allowance	1,428,787	1,081,423
Net defined benefit liability	939,543	895,486
Unrealized loss on inventories	698,858	573,243
Others	<u>94,858</u>	<u>81,891</u>
	<u>\$ 6,446,781</u>	<u>\$ 4,506,675</u>
Deferred income tax liabilities		
Temporary differences		
Available-for-sale financial assets	\$ (92,447)	\$ (31,271)
Unrealized exchange gains	<u>(48,736)</u>	<u>-</u>
	<u>\$ (141,183)</u>	<u>\$ (31,271)</u>

	Balance, Beginning of Year	Recognized in		Balance, End of Year
		Profit or Loss	Other Comprehensive Income	
<u>Year Ended December 31, 2016</u>				
Deferred income tax assets				
Temporary differences				
Depreciation	\$ 1,874,632	\$ 1,410,103	\$ -	3,284,735
Provision for sales returns and allowance	1,081,423	347,364	-	1,428,787
Net defined benefit liability	895,486	(82,810)	126,867	939,543
Unrealized loss on inventories	573,243	125,615	-	698,858
Others	81,891	12,967	-	94,858
	<u>\$ 4,506,675</u>	<u>\$ 1,813,239</u>	<u>\$ 126,867</u>	<u>\$ 6,446,781</u>
Deferred income tax liabilities				
Temporary differences				
Available-for-sale financial assets	\$ (31,271)	\$ -	\$ (61,176)	\$ (92,447)
Unrealized exchange gains	-	(48,736)	-	(48,736)
	<u>\$ (31,271)</u>	<u>\$ (48,736)</u>	<u>\$ (61,176)</u>	<u>\$ (141,183)</u>
<u>Year Ended December 31, 2015</u>				
Deferred income tax assets				
Temporary differences				
Depreciation	\$ 610,819	\$ 1,263,813	\$ -	\$ 1,874,632
Provision for sales returns and allowance	1,195,178	(113,755)	-	1,081,423
Net defined benefit liability	787,492	8,670	99,324	895,486
Unrealized loss on inventories	547,249	25,994	-	573,243
Others	68,941	12,950	-	81,891
	<u>\$ 3,209,679</u>	<u>\$ 1,197,672</u>	<u>\$ 99,324</u>	<u>\$ 4,506,675</u>
Deferred income tax liabilities				
Temporary differences				
Available-for-sale financial assets	\$ (15,280)	\$ -	\$ (15,991)	\$ (31,271)
Unrealized exchange gains	(184,470)	184,470	-	-
	<u>\$ (199,750)</u>	<u>\$ 184,470</u>	<u>\$ (15,991)</u>	<u>\$ (31,271)</u>

- d. The deductible temporary differences for which no deferred income tax assets have been recognized in the parent company only financial statements

As of December 31, 2016 and 2015, the aggregate deductible temporary differences for which no deferred income tax assets have been recognized amounted to NT\$1,919,784 thousand and NT\$1,972,286 thousand, respectively.



e. Unused tax-exemption information

As of December 31, 2016, the profits generated from the following projects of the Company are exempt from income tax for a five-year period:

	<b>Tax-exemption Period</b>
Construction and expansion of 2007	2014 to 2018
Construction and expansion of 2008	2015 to 2019
Construction and expansion of 2009	2018 to 2022

f. The information of unrecognized deferred income tax liabilities associated with investments

As of December 31, 2016 and 2015, the aggregate taxable temporary differences associated with investments in subsidiaries not recognized as deferred income tax liabilities amounted to NT\$83,181,401 thousand and NT\$80,919,309 thousand, respectively.

g. Integrated income tax information

	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Balance of the Imputation Credit Account	<u>\$ 82,072,562</u>	<u>\$ 59,973,516</u>

The estimated and actual creditable ratio for distribution of the Company's earnings of 2016 and 2015 were 13.94% and 12.57%, respectively; however, effective from January 1, 2015, the creditable ratio for individual shareholders residing in the R.O.C. will be half of the original creditable ratio according to the revised Article 66 - 6 of the R.O.C. Income Tax Law.

The imputation credit allocated to shareholders is based on its balance as of the date of the dividend distribution. The estimated creditable ratio may change when the actual distribution of the imputation credit is made.

All earnings generated prior to December 31, 1997 have been appropriated.

h. Income tax examination

The tax authorities have examined income tax returns of the Company through 2013. All investment tax credit adjustments assessed by the tax authorities have been recognized accordingly.

## 27. EARNINGS PER SHARE

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Basic EPS	<u>\$12.89</u>	<u>\$11.82</u>
Diluted EPS	<u>\$12.89</u>	<u>\$11.82</u>

EPS is computed as follows:

	Amounts (Numerator)	Number of Shares (Denominator) (In Thousands)	EPS (NT\$)
<u>Year ended December 31, 2016</u>			
Basic/Diluted EPS			
Net income available to common shareholders	<u>\$ 334,247,180</u>	<u>25,930,380</u>	<u>\$12.89</u>
<u>Year ended December 31, 2015</u>			
Basic EPS			
Net income available to common shareholders	\$ 306,573,837	25,930,288	<u>\$11.82</u>
Effect of dilutive potential common shares	<u>-</u>	<u>92</u>	
Diluted EPS			
Net income available to common shareholders (including effect of dilutive potential common shares)	<u>\$ 306,573,837</u>	<u>25,930,380</u>	<u>\$11.82</u>

## 28. ADDITIONAL INFORMATION OF EXPENSES BY NATURE

	<u>Years Ended December 31</u>	
	<u>2016</u>	<u>2015</u>
a. Depreciation of property, plant and equipment		
Recognized in cost of revenue	\$ 197,595,313	\$ 198,343,742
Recognized in operating expenses	16,357,124	14,925,181
Recognized in other operating income and expenses	<u>24,887</u>	<u>24,887</u>
	<u>\$ 213,977,324</u>	<u>\$ 213,293,810</u>
b. Amortization of intangible assets		
Recognized in cost of revenue	\$ 2,014,814	\$ 1,605,572
Recognized in operating expenses	<u>1,709,252</u>	<u>1,553,865</u>
	<u>\$ 3,724,066</u>	<u>\$ 3,159,437</u>
c. Research and development costs expensed as incurred	<u>\$ 70,366,179</u>	<u>\$ 64,831,860</u>
d. Employee benefits expenses		
Post-employment benefits		
Defined contribution plans	\$ 1,735,492	\$ 1,622,375
Defined benefit plans	<u>272,141</u>	<u>293,970</u>
	2,007,633	1,916,345
Other employee benefits	<u>86,133,216</u>	<u>79,254,303</u>
	<u>\$ 88,140,849</u>	<u>\$ 81,170,648</u>

(Continued)

	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Employee benefits expense summarized by function		
Recognized in cost of revenue	\$ 53,109,947	\$ 48,246,789
Recognized in operating expenses	<u>35,030,902</u>	<u>32,923,859</u>
	<u>\$ 88,140,849</u>	<u>\$ 81,170,648</u>
		(Concluded)

In accordance with the amendments to the R.O.C. Company Act in May 2015 and the amended the Company's Articles of Incorporation approved by the Company's shareholders in its meeting held on June 7, 2016, the Company shall allocate compensation to directors and profit sharing bonus to employees of the Company not more than 0.3% and not less than 1% of annual profits during the period, respectively. Prior to the amendments, the Company's Articles of Incorporation provided that, when allocating the net profits for each fiscal year, the Company shall first set aside legal capital reserve and special capital reserve, then set aside not more than 0.3% of the balance as compensation to directors and not less than 1% as profit sharing bonus to employees, respectively.

The Company accrued profit sharing bonus to employees based on a percentage of net income before income tax, profit sharing bonus to employees and compensation to directors during the period, which amounted to NT\$22,418,339 thousand and NT\$20,556,888 thousand for the years ended December 31, 2016 and 2015, respectively; compensation to directors was expensed based on estimated amount payable. If there is a change in the proposed amounts after the annual parent company only financial statements are authorized for issue, the differences are recorded as a change in accounting estimate.

The Board of Directors of the Company held on February 14, 2017 approved the profit sharing bonus to employees and compensation to directors in the amounts of NT\$22,418,339 thousand and NT\$376,432 thousand in cash for 2016, respectively. There is no significant difference between the aforementioned approved amounts and the amounts charged against earnings of 2016.

The Company's profit sharing bonus to employees and compensation to directors in the amounts of NT\$20,556,888 thousand and NT\$356,186 thousand in cash for 2015, respectively, had been approved by the Board of Directors on February 2, 2016. The profit sharing bonus to employees and compensation to directors in cash for 2015 had been reported to the Company's shareholders in its meeting held on June 7, 2016, after the amended the Company's Articles of Incorporation had been approved. The aforementioned approved amount has no difference with the one recognized in the parent company only financial statements for the year ended December 31, 2015.

The Company's profit sharing bonus to employees and compensation to directors in the amounts of NT\$17,645,966 thousand and NT\$406,854 thousand in cash for 2014, respectively, had been approved by the shareholders in its meetings held on June 9, 2015. The aforementioned approved amount has no difference with the one recognized in the parent company only financial statements for the year ended December 31, 2014.

The information about the appropriations of the Company's profit sharing bonus to employees and compensation to directors is available at the Market Observation Post System website.

## 29. CAPITAL MANAGEMENT

The Company requires significant amounts of capital to build and expand its production facilities and acquire additional equipment. In consideration of the industry dynamics, the Company manages its capital in a manner to ensure that it has sufficient and necessary financial resources to fund its working capital needs, capital asset purchases, research and development activities, dividend payments, debt service requirements and other business requirements associated with its existing operations over the next 12 months.

## 30. FINANCIAL INSTRUMENTS

### a. Categories of financial instruments

	December 31, 2016	December 31, 2015
Financial assets		
FVTPL		
Held for trading	\$ 151,070	\$ 6,026
Available-for-sale financial assets (Note)	3,279,220	1,050,645
Held-to-maturity financial assets	11,447,538	10,787,947
Loans and receivables		
Cash and cash equivalents	249,878,563	264,493,583
Notes and accounts receivable (including related parties)	126,862,867	82,918,805
Other receivables	3,088,166	2,581,900
Refundable deposits	<u>369,895</u>	<u>398,693</u>
	<u>\$ 395,077,319</u>	<u>\$ 362,237,599</u>
Financial liabilities		
FVTPL		
Held for trading	\$ 62,441	\$ 45,254
Amortized cost		
Short-term loans	57,958,200	39,474,000
Accounts payable (including related parties)	29,373,925	20,462,601
Payables to contractors and equipment suppliers	62,449,143	25,346,206
Accrued expenses and other current liabilities	19,485,257	16,797,935
Bonds payable (including long-term liabilities-current portion)	154,200,000	166,200,000
Other long-term payables (classified under accrued expenses and other current liabilities)	-	18,000
Guarantee deposits (including those classified under accrued expenses and other current liabilities )	<u>21,106,342</u>	<u>27,722,187</u>
	<u>\$ 344,635,308</u>	<u>\$ 296,066,183</u>

Note: Including financial assets carried at cost.

### b. Financial risk management objectives

The Company seeks to ensure sufficient cost-efficient funding readily available when needed. The Company manages its exposure to foreign currency risk, interest rate risk, equity price risk, credit risk and liquidity risk with the objective to reduce the potentially adverse effects the market uncertainties may have on its financial performance.

The plans for material treasury activities are reviewed by Audit Committees and/or Board of Directors in accordance with procedures required by relevant regulations or internal controls. During the implementation of such plans, Corporate Treasury function must comply with certain treasury procedures that provide guiding principles for overall financial risk management and segregation of duties.

c. Market risk

The Company is exposed to the market risks arising from changes in foreign exchange rates, interest rates and the prices in equity investments, and utilizes some derivative financial instruments to reduce the related risks.

Foreign currency risk

Most of the Company's operating activities are denominated in foreign currencies. Consequently, the Company is exposed to foreign currency risk. To protect against reductions in value and the volatility of future cash flows caused by changes in foreign exchange rates, the Company utilizes derivative financial instruments, including currency forward contracts and cross currency swaps, to hedge its currency exposure. These instruments help to reduce, but do not eliminate, the impact of foreign currency exchange rate movements.

The Company also holds short-term borrowings in foreign currencies in proportion to its expected future cash flows. This allows foreign-currency-denominated borrowings to be serviced with expected future cash flows and provides a partial hedge against transaction translation exposure.

The Company's sensitivity analysis to foreign currency risk mainly focuses on the foreign currency monetary items at the end of the reporting period. Assuming an unfavorable 10% movement in the levels of foreign exchanges against the New Taiwan dollar, the net income for the years ended December 31, 2016 and 2015 would have decreased by NT\$116,345 thousand and NT\$902,173 thousand, respectively, after taking into consideration of the hedging contracts and the hedged items.

Interest rate risk

The Company is exposed to interest rate risk arising from borrowing at fixed interest rates and from fixed income securities. All of the Company's long-term bonds have fixed interest rates and are measured at amortized cost. As such, changes in interest rates would not affect the future cash flows.

The Company classified fixed income securities as held-to-maturity financial assets. Because held-to-maturity fixed income securities are measured at amortized cost, changes in interest rates would not affect the fair value.

Other price risk

The Company is exposed to equity price risk arising from available-for-sale equity investments.

Assuming a hypothetical decrease of 5% in equity prices of the equity investments at the end of the reporting period, the net income for the years ended December 31, 2016 and 2015 would have been unaffected as they were classified as available-for-sale; however, the other comprehensive income for the years ended December 31, 2016 and 2015 would have decreased by NT\$141,570 thousand and NT\$44,410 thousand, respectively.



d. Credit risk management

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Company. The Company is exposed to credit risk from operating activities, primarily trade receivables, and from investing activities, primarily deposits, fixed-income investments and other financial instruments with banks. Credit risk is managed separately for business related and financial related exposures. As of the end of the reporting period, the Company's maximum credit risk exposure is mainly from the carrying amount of financial assets recognized in the parent company only balance sheet.

Business related credit risk

The Company has considerable trade receivables outstanding with its customers worldwide. A substantial majority of the Company's outstanding trade receivables are not covered by collateral or credit insurance. While the Company has procedures to monitor and limit exposure to credit risk on trade receivables, there can be no assurance such procedures will effectively limit its credit risk and avoid losses. This risk is heightened during periods when economic conditions worsen.

As of December 31, 2016 and 2015, the Company's ten largest customers accounted for 74% and 67% of accounts receivable, respectively. The Company believes the concentration of credit risk is insignificant for the remaining accounts receivable.

Financial credit risk

The Company regularly monitors and reviews the transaction limit applied to counterparties and adjusts the concentration limit according to market conditions and the credit standing of the counterparties. The Company mitigates its exposure by selecting counterparties with investment-grade credit ratings.

e. Liquidity risk management

The objective of liquidity risk management is to ensure the Company has sufficient liquidity to fund its business requirements associated with existing operations over the next 12 months. The Company manages its liquidity risk by maintaining adequate cash.

The table below summarizes the maturity profile of the Company's financial liabilities based on contractual undiscounted payments, including principal and interest.

	Less Than 1 Year	2-3 Years	4-5 Years	5+ Years	Total
<u>December 31, 2016</u>					
<u>Non-derivative financial liabilities</u>					
Short-term loans	\$ 57,974,562	\$ -	\$ -	\$ -	\$ 57,974,562
Accounts payable (including related parties)	29,373,925	-	-	-	29,373,925
Payables to contractors and equipment suppliers	62,449,143	-	-	-	62,449,143
Accrued expenses and other current liabilities	19,485,257	-	-	-	19,485,257
Bonds payable	40,067,749	61,831,777	35,340,742	22,979,426	160,219,694
Guarantee deposits (including those classified under accrued expenses and other current liabilities)	6,439,800	13,056,592	1,609,950	-	21,106,342
	<u>215,790,436</u>	<u>74,888,369</u>	<u>36,950,692</u>	<u>22,979,426</u>	<u>350,608,923</u>
					(Continued)

	<b>Less Than 1 Year</b>	<b>2-3 Years</b>	<b>4-5 Years</b>	<b>5+ Years</b>	<b>Total</b>
<u>Derivative financial instruments</u>					
Forward exchange contracts					
Outflows	\$ 26,366,343	\$ -	\$ -	\$ -	\$ 26,366,343
Inflows	<u>(26,490,320)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(26,490,320)</u>
	<u>(123,977)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(123,977)</u>
Cross currency swap contracts					
Outflows	5,478,066	-	-	-	5,478,066
Inflows	<u>(5,487,600)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(5,487,600)</u>
	<u>(9,534)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(9,534)</u>
	<u>\$ 215,656,925</u>	<u>\$ 74,888,369</u>	<u>\$ 36,950,692</u>	<u>\$ 22,979,426</u>	<u>\$ 350,475,412</u>
<u>December 31, 2015</u>					
<u>Non-derivative financial liabilities</u>					
Short-term loans	\$ 39,488,957	\$ -	\$ -	\$ -	\$ 39,488,957
Accounts payable (including related parties)	20,462,601	-	-	-	20,462,601
Payables to contractors and equipment suppliers	25,346,206	-	-	-	25,346,206
Accrued expenses and other current liabilities	16,797,935	-	-	-	16,797,935
Bonds payable	14,338,760	65,859,591	68,378,787	25,981,316	174,558,454
Other long-term payables (classified under accrued expenses and other current liabilities)	18,000	-	-	-	18,000
Guarantee deposits (including those classified under accrued expenses and other current liabilities)	<u>6,167,813</u>	<u>13,330,624</u>	<u>8,223,750</u>	<u>-</u>	<u>27,722,187</u>
	<u>122,620,272</u>	<u>79,190,215</u>	<u>76,602,537</u>	<u>25,981,316</u>	<u>304,394,340</u>
<u>Derivative financial instruments</u>					
Forward exchange contracts					
Outflows	15,380,767	-	-	-	15,380,767
Inflows	<u>(15,341,109)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(15,341,109)</u>
	<u>39,658</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>39,658</u>
	<u>\$ 122,659,930</u>	<u>\$ 79,190,215</u>	<u>\$ 76,602,537</u>	<u>\$ 25,981,316</u>	<u>\$ 304,433,998</u>
					(Concluded)

f. Fair value of financial instruments

1) Fair value measurements recognized in the parent company only balance sheets

Fair value measurements are grouped into Levels 1 to 3 based on the degree to which the fair value is observable:

- Level 1 fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 fair value measurements are those derived from inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- Level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

2) Fair value of financial instruments that are measured at fair value on a recurring basis

Fair value hierarchy

The following table presents the Company's financial assets and liabilities measured at fair value on a recurring basis:

	<b>December 31, 2016</b>			<b>Total</b>
	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	
<u>Financial assets at FVTPL</u>				
Held for trading				
Forward exchange contracts	\$ -	\$ 140,094	\$ -	\$ 140,094
Cross currency swap contracts	-	10,976	-	10,976
	<u>\$ -</u>	<u>\$ 151,070</u>	<u>\$ -</u>	<u>\$ 151,070</u>
<u>Available-for-sale financial assets</u>				
Publicly traded stocks	<u>\$ 2,843,952</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 2,843,952</u>
<u>Financial liabilities at FVTPL</u>				
Held for trading				
Forward exchange contracts	<u>\$ -</u>	<u>\$ 62,441</u>	<u>\$ -</u>	<u>\$ 62,441</u>
	<b>December 31, 2015</b>			
	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Total</b>
<u>Financial assets at FVTPL</u>				
Held for trading				
Forward exchange contracts	<u>\$ -</u>	<u>\$ 6,026</u>	<u>\$ -</u>	<u>\$ 6,026</u>
<u>Available-for-sale financial assets</u>				
Publicly traded stocks	<u>\$ 706,924</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 706,924</u>
<u>Financial liabilities at FVTPL</u>				
Held for trading				
Forward exchange contracts	<u>\$ -</u>	<u>\$ 45,254</u>	<u>\$ -</u>	<u>\$ 45,254</u>

There were no transfers between Level 1 and Level 2 for the years ended December 31, 2016 and 2015, respectively.

There were no purchases and disposals for assets on Level 3 for the years ended December 31, 2016 and 2015, respectively.

Valuation techniques and assumptions used in fair value measurement

The fair values of financial assets and financial liabilities are determined as follows:

- The fair values of financial assets and financial liabilities with standard terms and conditions and traded on active liquid markets are determined with reference to quoted market prices (includes publicly traded stocks).
- Forward exchange contracts and cross currency swap contracts are measured using quoted forward exchange rates and yield curves derived from quoted interest rates matching maturities of the contracts.

3) Fair value of financial instruments that are not measured at fair value

Except as detailed in the following table, the Company considers that the carrying amounts of financial instruments that are not measured at fair value recognized in the parent company only financial statements approximate their fair values.

	<u>December 31, 2016</u>		<u>December 31, 2015</u>	
	<b>Carrying Amount</b>	<b>Fair Value</b>	<b>Carrying Amount</b>	<b>Fair Value</b>
<u>Financial assets</u>				
Held-to-maturity financial assets				
Commercial paper	\$ 8,628,176	\$ 8,630,769	\$ -	\$ -
Corporate bonds/Bank debentures	2,819,362	2,821,660	7,787,947	7,792,428
Structured product	-	-	3,000,000	2,995,731
<u>Financial liabilities</u>				
Measured at amortized cost				
Bonds payable	154,200,000	155,930,125	166,200,000	167,709,976

Fair value hierarchy

The table below sets out the balances for the Company's assets and liabilities that are not measured at fair value but for which the fair value is disclosed:

	<u>December 31, 2016</u>			
	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Total</b>
<u>Assets</u>				
Held-to-maturity securities				
Commercial paper	\$ -	\$ 8,630,769	\$ -	\$ 8,630,769
Corporate bonds	<u>2,821,660</u>	<u>-</u>	<u>-</u>	<u>2,821,660</u>
	<u>\$ 2,821,660</u>	<u>\$ 8,630,769</u>	<u>\$ -</u>	<u>\$ 11,452,429</u>
<u>Liabilities</u>				
Measured at amortized cost				
Bonds payable	<u>\$ 155,930,125</u>	<u>-</u>	<u>-</u>	<u>\$ 155,930,125</u>
	<u>December 31, 2015</u>			
	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Total</b>
<u>Assets</u>				
Held-to-maturity securities				
Corporate bonds/Bank debentures	\$ 7,792,428	\$ -	\$ -	\$ 7,792,428
Structured product	<u>-</u>	<u>2,995,731</u>	<u>-</u>	<u>2,995,731</u>
	<u>\$ 7,792,428</u>	<u>\$ 2,995,731</u>	<u>\$ -</u>	<u>\$ 10,788,159</u>
<u>Liabilities</u>				
Measured at amortized cost				
Bonds payable	<u>\$ 167,709,976</u>	<u>-</u>	<u>-</u>	<u>\$ 167,709,976</u>

Fair value measurement

For investments in bonds, the fair value is determined using active market prices.

For investments in commercial paper and structured product, the fair value is determined using the present value of future cash flows based on the observable yield curves.

The fair value of the Company's bonds payable is determined using active market prices.

### 31. RELATED PARTY TRANSACTIONS

The significant transactions between the Company and its related parties, other than those disclosed in other notes, are summarized as follows:

a. Net revenue

<u>Item</u>	<u>Related Party Categories</u>	<u>Years Ended December 31</u>	
		<u>2016</u>	<u>2015</u>
Net revenue from sale of goods	Subsidiaries	\$ 633,923,575	\$ 564,722,352
	Associates	5,084,397	3,356,734
	Joint venture of the Company's subsidiaries	-	1,206
		<u>\$ 639,007,972</u>	<u>\$ 568,080,292</u>
Net revenue from royalties	Subsidiaries	\$ 355	\$ 457
	Associates	516,749	489,420
		<u>\$ 517,104</u>	<u>\$ 489,877</u>

b. Purchases

<u>Related Party Categories</u>	<u>Years Ended December 31</u>	
	<u>2016</u>	<u>2015</u>
Subsidiaries	\$ 27,788,470	\$ 31,090,925
Associates	10,107,719	11,126,415
	<u>\$ 37,896,189</u>	<u>\$ 42,217,340</u>

c. Receivables from related parties

<u>Item</u>	<u>Related Party Categories</u>	<u>December 31,</u>	<u>December 31,</u>
		<u>2016</u>	<u>2015</u>
Receivables from related parties	Subsidiaries	\$ 85,913,783	\$ 56,798,070
	Associates	931,787	484,612
		<u>\$ 86,845,570</u>	<u>\$ 57,282,682</u>
Other receivables from related parties	Subsidiaries	\$ 802,179	\$ 330,456
	Associates	146,621	124,871
		<u>\$ 948,800</u>	<u>\$ 455,327</u>



d. Payables to related parties

<u>Item</u>	<u>Related Party Categories</u>	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Payables to related parties	Subsidiaries	\$ 3,579,248	\$ 2,609,731
	Associates	<u>1,260,753</u>	<u>1,149,900</u>
		<u>\$ 4,840,001</u>	<u>\$ 3,759,631</u>

e. Acquisition of property, plant and equipment and intangible assets

<u>Related Party Categories</u>	<b>Acquisition Price</b>	
	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Subsidiaries	\$ -	\$ 41,146
Associates	<u>-</u>	<u>26,207</u>
	<u>\$ -</u>	<u>\$ 67,353</u>

f. Disposal of property, plant and equipment

<u>Related Party Categories</u>	<b>Proceeds</b>	
	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Subsidiaries	<u>\$ 10,622</u>	<u>\$ 183,838</u>

<u>Related Party Categories</u>	<b>Gains</b>	
	<b>Years Ended December 31</b>	
	<b>2016</b>	<b>2015</b>
Subsidiaries	<u>\$ 49,108</u>	<u>\$ 41,583</u>

<u>Related Party Categories</u>	<b>Deferred Gains from Disposal of Property, Plant and Equipment</b>	
	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Subsidiaries	<u>\$ 144,689</u>	<u>\$ 183,175</u>

g. Others

<u>Item</u>	<u>Related Party Categories</u>	<u>Years Ended December 31</u>	
		<u>2016</u>	<u>2015</u>
Manufacturing expenses	Subsidiaries	\$ 15,954	\$ 806
	Associates	1,376,763	2,321,774
	Joint venture of the Company's subsidiaries	<u>-</u>	<u>12,819</u>
		<u>\$ 1,392,717</u>	<u>\$ 2,335,399</u>
Research and development expenses	Subsidiaries	\$ 2,179,813	\$ 2,070,611
	Associates	161,671	142,833
	Joint venture of the Company's subsidiaries	<u>-</u>	<u>1,398</u>
		<u>\$ 2,341,484</u>	<u>\$ 2,214,842</u>
Marketing expenses - commission	Subsidiaries	<u>\$ 873,117</u>	<u>\$ 782,254</u>

The sales prices and payment terms to related parties were not significantly different from those of sales to third parties. For other related party transactions, price and terms were determined in accordance with mutual agreements.

The Company leased machinery and equipment, factory and office from Xintec and VIS. The lease terms and prices were both determined in accordance with mutual agreements. The rental expenses were paid to Xintec and VIS quarterly or monthly; the related expenses were both classified under manufacturing expenses.

The Company deferred the disposal gain/loss derived from sales of property, plant and equipment to related parties using equity method, and then recognized such gain/loss over the depreciable lives of the disposed assets.

h. Compensation of key management personnel

The compensation to directors and other key management personnel for the years ended December 31, 2016 and 2015 were as follows:

	<u>Years Ended December 31</u>	
	<u>2016</u>	<u>2015</u>
Short-term employee benefits	\$ 1,926,654	\$ 1,798,390
Post-employment benefits	<u>3,617</u>	<u>10,567</u>
	<u>\$ 1,930,271</u>	<u>\$ 1,808,957</u>

The compensation to directors and other key management personnel were determined by the Compensation Committee of the Company in accordance with the individual performance and the market trends.

### 32. SIGNIFICANT OPERATING LEASE ARRANGEMENTS

The Company leases several parcels of land. These operating leases expire between January 2017 and March 2035 and can be renewed upon expiration.

The Company expensed the lease payments as follows:

	<u>Years Ended December 31</u>	
	<u>2016</u>	<u>2015</u>
Minimum lease payments	<u>\$ 815,178</u>	<u>\$ 720,494</u>

Future minimum lease payments under the above non-cancellable operating leases are as follows:

	<u>December 31,</u> <u>2016</u>	<u>December 31,</u> <u>2015</u>
Not later than 1 year	\$ 777,233	\$ 742,592
Later than 1 year and not later than 5 years	2,683,437	2,574,330
Later than 5 years	<u>5,300,624</u>	<u>5,398,730</u>
	<u>\$ 8,761,294</u>	<u>\$ 8,715,652</u>

### 33. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED COMMITMENTS

Significant contingent liabilities and unrecognized commitments of the Company as of the end of the reporting period, excluding those disclosed in other notes, were as follows:

- a. Under a technical cooperation agreement with Industrial Technology Research Institute, the R.O.C. Government or its designee approved by the Company can use up to 35% of the Company's capacity provided the Company's outstanding commitments to its customers are not prejudiced. The term of this agreement is for five years beginning from January 1, 1987 and is automatically renewed for successive periods of five years unless otherwise terminated by either party with one year prior notice. As of December 31, 2016, the R.O.C. Government did not invoke such right.
- b. Under a Shareholders Agreement entered into with Philips and EDB Investments Pte Ltd. on March 30, 1999, the parties formed a joint venture company, SSMC, which is an integrated circuit foundry in Singapore. The Company's equity interest in SSMC was 32%. Nevertheless, in September 2006, Philips spun-off its semiconductor subsidiary which was renamed as NXP B.V. Further, the Company and NXP B.V. purchased all the SSMC shares owned by EDB Investments Pte Ltd. pro rata according to the Shareholders Agreement on November 15, 2006. After the purchase, the Company and NXP B.V. currently own approximately 39% and 61% of the SSMC shares, respectively. The Company and NXP B.V. are required, in the aggregate, to purchase at least 70% of SSMC's capacity, but the Company alone is not required to purchase more than 28% of the capacity. If any party defaults on the commitment and the capacity utilization of SSMC falls below a specific percentage of its capacity, the defaulting party is required to compensate SSMC for all related unavoidable costs. There was no default from the aforementioned commitment as of December 31, 2016.
- c. In June 2010, Keranos, LLC. filed a complaint in the U.S. District Court for the Eastern District of Texas alleging that the Company, TSMC North America, and several other leading technology companies infringe three expired U.S. patents. In response, the Company, TSMC North America, and several co-defendants in the Texas case filed a lawsuit against Keranos in the U.S. District Court for the Northern District of California in November 2010, seeking a judgment declaring that they did not infringe the asserted patents, and that those patents were invalid. These two litigations have been consolidated into a single lawsuit in the U.S. District Court for the Eastern District of Texas. In

February 2014, the Court entered a final judgment in favor of the Company and TSMC North America, dismissing all of Keranos' claims against the Company and TSMC North America with prejudice. Keranos appealed the final judgment to the U.S. Court of Appeals for the Federal Circuit, and in August 2015, the Federal Circuit remanded the case back to the Texas court for further proceedings. In January 2017, the Texas court dismissed all of Keranos's claims against the Company and TSMC North America with prejudice, and dismissed the Company's and TSMC North America's counterclaims without prejudice. The case is over as to the Company and TSMC North America.

- d. In December 2010, Ziptronix, Inc. filed a complaint in the U.S. District Court for the Northern District of California accusing the Company, TSMC North America and one other company of infringing several U.S. patents. In September 2014, the Court granted summary judgment of noninfringement in favor of the Company and TSMC North America. Ziptronix, Inc. can appeal the Court's order. In August 2015, Tessera Technologies, Inc. announced it had acquired Ziptronix. In February 2017, the Court dismissed all of Ziptronix's claims against the Company and TSMC North America with prejudice.
- e. The Company joined the Customer Co-Investment Program of ASML and entered into the investment agreement in August 2012. The agreement includes an investment of EUR837,816 thousand by TSMC Global to acquire 5% of ASML's equity with a lock-up period of 2.5 years. TSMC Global has acquired the aforementioned equity on October 31, 2012. The lock-up period expired on May 1, 2015 and as of October 8, 2015, all ASML shares had been disposed.

Both parties also signed the research and development funding agreement whereby the Company shall provide EUR276,000 thousand to ASML's research and development programs from 2013 to 2017. As of December 31, 2016, the Company has paid EUR228,603 thousand to ASML under the research and development funding agreement.

- f. In March 2014, DSS Technology Management, Inc. (DSS) filed a complaint in the U.S. District Court for the Eastern District of Texas alleging that the Company, TSMC North America, TSMC Development and several other companies infringe one U.S. patent. TSMC Development has subsequently been dismissed. In May 2015, the Court entered a final judgment of noninfringement in favor of the Company and TSMC North America. DSS appealed the final judgment to the U.S. Court of Appeals for the Federal Circuit (Federal Circuit). In November 2015, the Patent Trial and Appeal Board (PTAB) determined after concluding an Inter Partes Review (IPR) that the patent claims asserted by DSS in the District Court litigation are unpatentable. DSS appealed the PTAB's decision to the Federal Circuit in January 2016. In March 2016, the District Court's judgment of noninfringement was affirmed by the Federal Circuit. In April 2016, the District Court litigation between the parties and the related Federal Circuit appeal were dismissed, and the appeal proceeding of the PTAB's decision is also over as to the Company.
- g. As of December 31, 2016, the Company provided financial guarantees of NT\$37,028,850 thousand to its subsidiary, TSMC Global, in respect of the issuance of unsecured corporate bonds.
- h. As of December 31, 2016, the Company provided endorsement guarantees of NT\$2,679,385 thousand to its subsidiary, TSMC North America, in respect of providing endorsement guarantees for office leasing contract.

#### **34. SIGNIFICANT LOSS FROM DISASTER**

On February 6, 2016, an earthquake struck Taiwan. The resulting damage was mostly to inventories and equipment. The Company recognized related earthquake losses of NT\$2,492,138 thousand, net of insurance claim, for the year ended December 31, 2016. Such losses were primarily included in cost of revenue.

### 35. EXCHANGE RATE INFORMATION OF FOREIGN-CURRENCY FINANCIAL ASSETS AND LIABILITIES

The following information was summarized according to the foreign currencies other than the functional currency of the Company. The exchange rates disclosed were used to translate the foreign currencies into the functional currency. The significant financial assets and liabilities denominated in foreign currencies were as follows:

	<b>Foreign Currencies (In Thousands)</b>	<b>Exchange Rate (Note)</b>	<b>Carrying Amount (In Thousands)</b>
<u>December 31, 2016</u>			
<u>Financial assets</u>			
Monetary items			
USD	\$ 4,583,146	32.199	\$ 147,572,712
EUR	19,545	34.30	670,405
JPY	36,963,829	0.2775	10,257,463
Non-monetary items			
HKD	257,056	4.15	1,066,780
<u>Financial liabilities</u>			
Monetary items			
USD	3,981,333	32.199	128,194,952
EUR	183,821	34.30	6,305,052
JPY	60,843,106	0.2775	16,883,962
<u>December 31, 2015</u>			
<u>Financial assets</u>			
Monetary items			
USD	3,075,149	32.895	101,157,030
EUR	43,050	36.00	1,549,813
JPY	9,626,627	0.2733	2,630,957
Non-monetary items			
HKD	166,727	4.24	706,924
<u>Financial liabilities</u>			
Monetary items			
USD	2,925,009	32.895	96,218,162
EUR	43,293	36.00	1,558,534
JPY	25,993,829	0.2733	7,104,113

Note: Exchange rate represents the number of N.T. dollars for which one foreign currency could be exchanged.

The realized and unrealized foreign exchange gain and loss were net gains of NT\$609,345 thousand and NT\$2,698,396 thousand for the years ended December 31, 2016 and 2015, respectively. Since there were varieties of foreign currency transactions of the Company, the Company was unable to disclose foreign exchange gain (loss) towards each foreign currency with significant impact.



### **36. ADDITIONAL DISCLOSURES**

Following are the additional disclosures required by the Securities and Futures Bureau for the Company:

- a. Financings provided: Please see Table 1 attached;
- b. Endorsement/guarantee provided: Please see Table 2 attached;
- c. Marketable securities held (excluding investments in subsidiaries, associates and joint venture): Please see Table 3 attached;
- d. Marketable securities acquired and disposed of at costs or prices of at least NT\$300 million or 20% of the paid-in capital: Please see Table 4 attached;
- e. Acquisition of individual real estate properties at costs of at least NT\$300 million or 20% of the paid-in capital: Please see Table 5 attached;
- f. Disposal of individual real estate properties at prices of at least NT\$300 million or 20% of the paid-in capital: None;
- g. Total purchases from or sales to related parties of at least NT\$100 million or 20% of the paid-in capital: Please see Table 6 attached;
- h. Receivables from related parties amounting to at least NT\$100 million or 20% of the paid-in capital: Please see Table 7 attached;
- i. Information about the derivative financial instruments transaction: Please see Note 7;
- j. Names, locations, and related information of investees over which the Company exercises significant influence (excluding information on investment in mainland China): Please see Table 8 attached;
- k. Information on investment in mainland China
  - 1) The name of the investee in mainland China, the main businesses and products, its issued capital, method of investment, information on inflow or outflow of capital, percentage of ownership, income (losses) of the investee, share of profits/losses of investee, ending balance, amount received as dividends from the investee, and the limitation on investee: Please see Table 9 attached.
  - 2) Significant direct or indirect transactions with the investee, its prices and terms of payment, unrealized gain or loss, and other related information which is helpful to understand the impact of investment in mainland China on financial reports: Please see Note 31.

### **37. OPERATING SEGMENTS INFORMATION**

The Company has provided the operating segments disclosure in the consolidated financial statements.

## Taiwan Semiconductor Manufacturing Company Limited and Investees

FINANCINGS PROVIDED  
FOR THE YEAR ENDED DECEMBER 31, 2016  
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

No.	Financing Company	Counter-party	Financial Statement Account	Related Party	Maximum Balance for the Period (RMB in Thousands) (Note 2)	Ending Balance (RMB in Thousands) (Note 2)	Amount Actually Drawn (RMB in Thousands)	Interest Rate	Nature for Financing	Transaction Amounts	Reason for Financing (Note 3)	Allowance for Bad Debt	Collateral		Financing Limits for Each Borrowing Company (Note 1)	Financing Company's Total Financing Amount Limits
													Item	Value		
1	TSMC China	TSMC Nanjing	Other receivables from related parties	Yes	\$ 21,313,180 (RMB4,600,000)	\$ 21,313,180 (RMB4,600,000)	\$ 4,169,970 (RMB 900,000)	0.35%-1.5%	The need for short-term/long-term financing (Note 3)	\$ -	Operating capital	\$ -	\$ -	\$ 42,850,549 (Note 1)	\$ 42,850,549 (Note 1)	

Note 1: The total amount for lending to a company for a short-term period shall not exceed ten percent (10%) of the net worth of TSMC China. In addition, the total amount lendable to any one borrower shall be no more than thirty percent (30%) of the borrower's net worth. The above restriction does not apply to the subsidiaries whose voting shares are 100% owned, directly or indirectly, by TSMC. However, the total amount lendable to 100% owned subsidiaries by TSMC shall not exceed forty percent (40%) of the net worth of TSMC China. When there is a lending for funding needs by TSMC China to TSMC, or to the subsidiaries, which are not located in Taiwan, directly or indirectly wholly owned by TSMC, the lending will not be subject to the restriction set forth in the above paragraph of this Article. Notwithstanding the foregoing, the aggregate amount available for lending and the total amount lending limit for such borrower still shall not exceed the net worth of TSMC China.

Note 2: The maximum balance for the period and ending balance represent the amounts approved by the Board of Directors.

Note 3: The restriction of the term of each loan for funding not exceeding one year shall not apply to inter-company loans for funding between offshore subsidiaries in which the Company holds, directly or indirectly, 100% of the voting shares.

## Taiwan Semiconductor Manufacturing Company Limited and Investees

ENDORSEMENTS/GUARANTEES PROVIDED  
FOR THE YEAR ENDED DECEMBER 31, 2016

(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

No.	Endorsement/ Guarantee Provider	Guaranteed Party		Limits on Endorsement/ Guarantee Amount Provided to Each Guaranteed Party (Notes 1 and 2)	Maximum Balance for the Period for the Period (US\$ in Thousands) (Note 3)	Ending Balance (US\$ in Thousands) (Note 3)	Amount Actually Drawn (US\$ in Thousands)	Amount of Endorsement/ Guarantee Collateralized by Properties	Ratio of Accumulated Endorsement/ Guarantee to Net Equity per Latest Financial Statements	Maximum Endorsement/ Guarantee Amount Allowable (Note 2)	Guarantee Provided by Parent Company	Guarantee Provided by A Subsidiary	Guarantee Provided to Subsidiaries in Mainland China
		Name	Nature of Relationship										
0	TSMC	TSMC Global	Subsidiary	\$ 347,312,065	\$ 48,298,500 (US\$ 1,500,000)	\$ 37,028,850 (US\$ 1,150,000)	\$ 37,028,850 (US\$ 1,150,000)	\$ -	2.67%	\$ 347,312,065	Yes	No	No
		TSMC North America	Subsidiary	347,312,065	2,679,385 (US\$ 83,213)	2,679,385 (US\$ 83,213)	2,679,385 (US\$ 83,213)	-	0.19%	347,312,065	Yes	No	No

Note 1: The total amount of the guarantee provided by TSMC to any individual entity shall not exceed ten percent (10%) of TSMC's net worth, or the net worth of such entity. However, subsidiaries whose voting shares are 100% owned, directly or indirectly, by TSMC are not subject to the above restrictions after the approval of the Board of Directors.

Note 2: The total amount of guarantee shall not exceed twenty-five percent (25%) of TSMC's net worth.

Note 3: The maximum balance for the period and ending balance represent the amounts approved by the Board of Directors.

## Taiwan Semiconductor Manufacturing Company Limited and Investees

## MARKETABLE SECURITIES HELD

DECEMBER 31, 2016

(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2016				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC	Corporate bond	-	Held-to-maturity financial assets	-	\$ 1,967,303	N/A	\$ 1,969,240	
	CPC Corporation, Taiwan	-	"	-	400,250	N/A	400,389	
	Hon Hai Precision Ind. Co., Ltd.	-	"	-	200,848	N/A	200,865	
	Taiwan Power Company	-	"	-	150,742	N/A	150,763	
	Nan Ya Plastics Corporation	-	"	-	100,219	N/A	100,403	
	Fomosa Petrochemical Corporation	-	"	-	-	-	-	
	Commercial paper	-	Held-to-maturity financial assets	865	8,628,176	N/A	8,630,769	
	Taiwan Power Company	-	"	-	-	-	-	
	Stock	-	Available-for-sale financial assets	58,320	1,650,450	12	1,650,450	
	Motech	-	"	21,105	1,066,780	1	1,066,780	
	Semiconductor Manufacturing International Corporation	-	"	2,208	126,722	4	126,722	
	RichWave Technology Corp.	-	Financial assets carried at cost	21,230	193,584	10	193,584	
	United Industrial Gases Co., Ltd.	-	"	10,500	105,000	7	105,000	
	Shin-Etsu Handokai Taiwan Co., Ltd.	-	"	11,124	99,041	6	99,041	
Global Investment Holding Inc.	-	"	2,560	18,121	2	18,121		
W.K. Technology Fund IV	-	"	-	-	-	-		
Fund	-	Financial assets carried at cost	-	11,259	12	11,259		
Horizon Ventures Fund	-	"	-	8,263	1	8,263		
Crimson Asia Capital	-	"	-	-	-	-		
TSMC Partners	Common stock	-	Financial assets carried at cost	10,440	US\$ 65,000	25	US\$ 65,000	
	Tela Innovations	-	"	6,333	-	13	-	
	Mcube Inc.	-	"	-	-	-	-	
	Fund	-	Financial assets carried at cost	-	US\$ 7,291	9	US\$ 7,291	
TSMC Global	China Walden Venture Investments II, L.P.	-	"	-	US\$ 4,270	6	US\$ 4,270	
	Shanghai Walden Venture Capital Enterprise	-	"	-	-	-	-	
	Corporate bond	-	Available-for-sale financial assets	-	US\$ 29,886	N/A	US\$ 29,886	
	Bank of America Corp.	-	"	-	US\$ 26,231	N/A	US\$ 26,231	
	JPMorgan Chase & Co.	-	"	-	US\$ 25,451	N/A	US\$ 25,451	
	Morgan Stanley	-	"	-	US\$ 18,769	N/A	US\$ 18,769	
	Goldman Sachs Group Inc.	-	"	-	US\$ 17,059	N/A	US\$ 17,059	
	Verizon Communications	-	"	-	US\$ 16,819	N/A	US\$ 16,819	
	Citigroup Inc.	-	"	-	US\$ 13,850	N/A	US\$ 13,850	
	Abovie Inc.	-	"	-	US\$ 13,332	N/A	US\$ 13,332	
	AT&T Inc.	-	"	-	US\$ 11,850	N/A	US\$ 11,850	
	Gilead Sciences Inc.	-	"	-	US\$ 11,618	N/A	US\$ 11,618	
	Aetna Inc.	-	"	-	US\$ 11,598	N/A	US\$ 11,598	
	PNC Bank NA	-	"	-	US\$ 10,533	N/A	US\$ 10,533	
Capital One NA	-	"	-	US\$ 10,405	N/A	US\$ 10,405		
Oracle Corp.	-	"	-	-	-	-		

(Continued)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2016				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Svenska Handelsbanken AB	-	Available-for-sale financial assets	-	US\$ 9,837	N/A	US\$ 9,837	
	CVS Health Corp.	-	"	-	US\$ 9,736	N/A	US\$ 9,736	
	Westpac Banking Corp.	-	"	-	US\$ 8,905	N/A	US\$ 8,905	
	Anheuser Busch In Bev Fin.	-	"	-	US\$ 8,737	N/A	US\$ 8,737	
	Ford Motor Credit Co LLC	-	"	-	US\$ 8,681	N/A	US\$ 8,681	
	Analog Devices, Inc.	-	"	-	US\$ 8,619	N/A	US\$ 8,619	
	Teva Pharmaceuticals Netherlands	-	"	-	US\$ 8,467	N/A	US\$ 8,467	
	American Intl. Group	-	"	-	US\$ 7,944	N/A	US\$ 7,944	
	Credit Suisse New York	-	"	-	US\$ 7,267	N/A	US\$ 7,267	
	BB&T Corporation	-	"	-	US\$ 7,189	N/A	US\$ 7,189	
	BMW US Capital LLC	-	"	-	US\$ 7,180	N/A	US\$ 7,180	
	Prisco Global Funding I	-	"	-	US\$ 7,140	N/A	US\$ 7,140	
	Daimler Finance NA LLC.	-	"	-	US\$ 7,101	N/A	US\$ 7,101	
	Bank of Ny Mellon Corp.	-	"	-	US\$ 7,006	N/A	US\$ 7,006	
	BP Capital Markets PLC	-	"	-	US\$ 6,658	N/A	US\$ 6,658	
	ERAC USA Finance LLC	-	"	-	US\$ 6,623	N/A	US\$ 6,623	
	Duke Energy Corp.	-	"	-	US\$ 6,535	N/A	US\$ 6,535	
	Southern Co.	-	"	-	US\$ 6,510	N/A	US\$ 6,510	
	Ventias Realty LP/Cap Ctp.	-	"	-	US\$ 6,429	N/A	US\$ 6,429	
	Citizens Bank NA/RI	-	"	-	US\$ 6,331	N/A	US\$ 6,331	
	Suntrust Banks Inc.	-	"	-	US\$ 6,203	N/A	US\$ 6,203	
	Welltower Inc.	-	"	-	US\$ 6,145	N/A	US\$ 6,145	
	Wells Fargo & Company	-	"	-	US\$ 6,127	N/A	US\$ 6,127	
	American Express Credit	-	"	-	US\$ 6,045	N/A	US\$ 6,045	
	Berkshire Hathaway Fin.	-	"	-	US\$ 6,017	N/A	US\$ 6,017	
	Skandinaviska Enskilda Banken AB	-	"	-	US\$ 6,001	N/A	US\$ 6,001	
	Sysco Corporation	-	"	-	US\$ 5,978	N/A	US\$ 5,978	
	Express Scripts Holding	-	"	-	US\$ 5,899	N/A	US\$ 5,899	
	Toronto Dominion Bank	-	"	-	US\$ 5,806	N/A	US\$ 5,806	
	Groupe Danone S.A.	-	"	-	US\$ 5,763	N/A	US\$ 5,763	
	Shell International Fin.	-	"	-	US\$ 5,713	N/A	US\$ 5,713	
	Toyota Motor Credit Corp.	-	"	-	US\$ 5,633	N/A	US\$ 5,633	
	TIAA Asset Management Finance LLC	-	"	-	US\$ 5,617	N/A	US\$ 5,617	
	ABN AMRO Bank N.V.	-	"	-	US\$ 5,572	N/A	US\$ 5,572	
	Protective Life Global Funding	-	"	-	US\$ 5,552	N/A	US\$ 5,552	
	Key Bank N.A.	-	"	-	US\$ 5,532	N/A	US\$ 5,532	
	Mitsubishi UFJ Fin Grp.	-	"	-	US\$ 5,524	N/A	US\$ 5,524	
	Cisco Systems Inc.	-	"	-	US\$ 5,511	N/A	US\$ 5,511	
	Hyundai Capital America	-	"	-	US\$ 5,471	N/A	US\$ 5,471	
	New York Life Global FDG	-	"	-	US\$ 5,445	N/A	US\$ 5,445	
	Siemens Financieringsmat	-	"	-	US\$ 5,357	N/A	US\$ 5,357	
	Fifth Third Bank	-	"	-	US\$ 5,341	N/A	US\$ 5,341	
	Aviation Capital Group	-	"	-	US\$ 5,144	N/A	US\$ 5,144	
	Sempra Energy	-	"	-	US\$ 5,144	N/A	US\$ 5,144	
	Intl. Bank Recon. & Development	-	"	-	US\$ 5,137	N/A	US\$ 5,137	
	HSBC Holdings PLC	-	"	-	US\$ 5,124	N/A	US\$ 5,124	
	UBS AG Stamford CT	-	"	-	US\$ 5,017	N/A	US\$ 5,017	
	Sumitomo Mitsui Trust Bank, Limited	-	"	-	US\$ 5,008	N/A	US\$ 5,008	
	Macquarie Group Ltd.	-	"	-	US\$ 4,984	N/A	US\$ 4,984	
	Reliance Stand Life II	-	"	-	US\$ 4,925	N/A	US\$ 4,925	

(Continued)



Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2016				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	<p> Dominion Resources Inc.  Walgreens Boots Alliance  Swedbank AB  Air Liquide Finance  ING Bank N.V.  Jackson Natl Life Global  Mondelēz International  Mizuho Financial Group  Enel Finance Intl N.V.  CA, Inc.  Deutsche Telekom International Fin.  Oaktree Capital Management, L.P.  Twenty-First Century Fox Inc.  Lloyds Bank PLC  Schlumberger Hldgs Corp.  Nextera Energy Capital  Keycorp Pty Ltd.  Ameren Corp.  Pepsico Inc.  State Street Corp.  United Technologies Corporation  Fortive Corporation  Wells Fargo Bank NA  Autozone Inc.  Husky Energy Inc.  Sumitomo Mitsui Financial Group  Fifth Third Bancorp  Ryder System Inc.  Anheuser Busch InBev Worldwide Inc.  US Bank NA Cincinnati  UBS Group Funding  BAT Intl Finance PLC  Credit Agricole London  Lam Research Corp.  Time Warner Inc.  Canadian Imperial Bank  BNP Paribas New York Branch  Suncorp Metway Ltd.  Cooperative Centrale  Microsoft Corp.  HSBC USA Inc.  Rabobank Nederland NY  Principal Life Global Funding II  KfW  PartnerRe Finance B LLC  Sprint Spectrum L.P.  Apple Inc.  Exelon Generation Co. LLC  MetLife Global Funding I  Unitedhealth Group Inc. </p>	-	Available-for-sale financial assets	-	US\$ 4,907	N/A	US\$ 4,907	
		-	"	-	US\$ 4,905	N/A	US\$ 4,905	
		-	"	-	US\$ 4,839	N/A	US\$ 4,839	
		-	"	-	US\$ 4,696	N/A	US\$ 4,696	
		-	"	-	US\$ 4,692	N/A	US\$ 4,692	
		-	"	-	US\$ 4,570	N/A	US\$ 4,570	
		-	"	-	US\$ 4,527	N/A	US\$ 4,527	
		-	"	-	US\$ 4,436	N/A	US\$ 4,436	
		-	"	-	US\$ 4,402	N/A	US\$ 4,402	
		-	"	-	US\$ 4,353	N/A	US\$ 4,353	
		-	"	-	US\$ 4,340	N/A	US\$ 4,340	
		-	"	-	US\$ 4,316	N/A	US\$ 4,316	
		-	"	-	US\$ 4,271	N/A	US\$ 4,271	
		-	"	-	US\$ 4,220	N/A	US\$ 4,220	
		-	"	-	US\$ 4,150	N/A	US\$ 4,150	
		-	"	-	US\$ 4,067	N/A	US\$ 4,067	
		-	"	-	US\$ 4,043	N/A	US\$ 4,043	
		-	"	-	US\$ 4,017	N/A	US\$ 4,017	
		-	"	-	US\$ 4,004	N/A	US\$ 4,004	
		-	"	-	US\$ 3,995	N/A	US\$ 3,995	
		-	"	-	US\$ 3,968	N/A	US\$ 3,968	
		-	"	-	US\$ 3,941	N/A	US\$ 3,941	
		-	"	-	US\$ 3,880	N/A	US\$ 3,880	
		-	"	-	US\$ 3,803	N/A	US\$ 3,803	
		-	"	-	US\$ 3,775	N/A	US\$ 3,775	
		-	"	-	US\$ 3,772	N/A	US\$ 3,772	
		-	"	-	US\$ 3,771	N/A	US\$ 3,771	
		-	"	-	US\$ 3,730	N/A	US\$ 3,730	
		-	"	-	US\$ 3,659	N/A	US\$ 3,659	
		-	"	-	US\$ 3,568	N/A	US\$ 3,568	
		-	"	-	US\$ 3,547	N/A	US\$ 3,547	
		-	"	-	US\$ 3,497	N/A	US\$ 3,497	
		-	"	-	US\$ 3,331	N/A	US\$ 3,331	
		-	"	-	US\$ 3,218	N/A	US\$ 3,218	
		-	"	-	US\$ 3,022	N/A	US\$ 3,022	
		-	"	-	US\$ 3,002	N/A	US\$ 3,002	
		-	"	-	US\$ 3,000	N/A	US\$ 3,000	
		-	"	-	US\$ 2,983	N/A	US\$ 2,983	
		-	"	-	US\$ 2,974	N/A	US\$ 2,974	
		-	"	-	US\$ 2,905	N/A	US\$ 2,905	
		-	"	-	US\$ 2,869	N/A	US\$ 2,869	
		-	"	-	US\$ 2,855	N/A	US\$ 2,855	
		-	"	-	US\$ 2,782	N/A	US\$ 2,782	
		-	"	-	US\$ 2,748	N/A	US\$ 2,748	
		-	"	-	US\$ 2,709	N/A	US\$ 2,709	
		-	"	-	US\$ 2,705	N/A	US\$ 2,705	
		-	"	-	US\$ 2,607	N/A	US\$ 2,607	
		-	"	-	US\$ 2,584	N/A	US\$ 2,584	
		-	"	-	US\$ 2,524	N/A	US\$ 2,524	
		-	"	-	US\$ 2,500	N/A	US\$ 2,500	

(Continued)

Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2016				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Toronto Domin Holding	-	Available-for-sale financial assets	-	US\$ 2,478	N/A	US\$ 2,478	
	Nordea Bank AB	-	"	-	US\$ 2,457	N/A	US\$ 2,457	
	Commonwealth Bank Australia NY	-	"	-	US\$ 2,404	N/A	US\$ 2,404	
	Marriott International, Inc.	-	"	-	US\$ 2,399	N/A	US\$ 2,399	
	Dow Chemical Co/The	-	"	-	US\$ 2,357	N/A	US\$ 2,357	
	Mckesson Corp.	-	"	-	US\$ 2,253	N/A	US\$ 2,253	
	Public Service Colorado	-	"	-	US\$ 2,166	N/A	US\$ 2,166	
	Allied World Assurance	-	"	-	US\$ 2,155	N/A	US\$ 2,155	
	Celgene Corp.	-	"	-	US\$ 2,115	N/A	US\$ 2,115	
	Stancorp Financial Group	-	"	-	US\$ 2,097	N/A	US\$ 2,097	
	Johnson Controls International PLC	-	"	-	US\$ 2,052	N/A	US\$ 2,052	
	The Bear Stearns Companies LLC	-	"	-	US\$ 2,011	N/A	US\$ 2,011	
	British Telecommunications PLC	-	"	-	US\$ 2,011	N/A	US\$ 2,011	
	Erste Bank der oesterreichischen Sparkassen AG	-	"	-	US\$ 2,000	N/A	US\$ 2,000	
	Norinchukin Bank	-	"	-	US\$ 2,000	N/A	US\$ 2,000	
	Nordic Investment Bank	-	"	-	US\$ 1,996	N/A	US\$ 1,996	
	FMS Wermanagement	-	"	-	US\$ 1,995	N/A	US\$ 1,995	
	Asian Development Bank	-	"	-	US\$ 1,994	N/A	US\$ 1,994	
	Kells Funding LLC	-	"	-	US\$ 1,993	N/A	US\$ 1,993	
	Magellan Midstream Partners LP	-	"	-	US\$ 1,971	N/A	US\$ 1,971	
	Stryker Corp.	-	"	-	US\$ 1,951	N/A	US\$ 1,951	
	National Australia Bank/NY	-	"	-	US\$ 1,944	N/A	US\$ 1,944	
	Huntington National Bank	-	"	-	US\$ 1,911	N/A	US\$ 1,911	
	BPCE SA	-	"	-	US\$ 1,910	N/A	US\$ 1,910	
	Royal Bank of Canada	-	"	-	US\$ 1,898	N/A	US\$ 1,898	
	Oncor Electric Delivery	-	"	-	US\$ 1,893	N/A	US\$ 1,893	
	WestRock RKT Company	-	"	-	US\$ 1,853	N/A	US\$ 1,853	
	Orange S.A.	-	"	-	US\$ 1,843	N/A	US\$ 1,843	
	Regency Centers, L.P.	-	"	-	US\$ 1,824	N/A	US\$ 1,824	
	LyondellBasell Industries N.V.	-	"	-	US\$ 1,817	N/A	US\$ 1,817	
	Aust. & NZ Banking Grp. NY	-	"	-	US\$ 1,796	N/A	US\$ 1,796	
	Southern Power Company	-	"	-	US\$ 1,794	N/A	US\$ 1,794	
	Dominion Gas Holdings, LLC	-	"	-	US\$ 1,785	N/A	US\$ 1,785	
	Cardinal Health Inc.	-	"	-	US\$ 1,764	N/A	US\$ 1,764	
	Kimco Realty Corp.	-	"	-	US\$ 1,754	N/A	US\$ 1,754	
	Amgen Inc.	-	"	-	US\$ 1,739	N/A	US\$ 1,739	
	Tyson Foods, Inc.	-	"	-	US\$ 1,706	N/A	US\$ 1,706	
	Enterprise Products Operating, LLC	-	"	-	US\$ 1,704	N/A	US\$ 1,704	
	Deutsche Bank AG, London	-	"	-	US\$ 1,697	N/A	US\$ 1,697	
	Pacific Gas & Electric	-	"	-	US\$ 1,644	N/A	US\$ 1,644	
	Trans Canada Pipelines	-	"	-	US\$ 1,633	N/A	US\$ 1,633	
	African Development Bank	-	"	-	US\$ 1,566	N/A	US\$ 1,566	
	Capital One Bank (USA), NA	-	"	-	US\$ 1,562	N/A	US\$ 1,562	
	Branch Banking & Trust	-	"	-	US\$ 1,553	N/A	US\$ 1,553	
	Simon Property Group LP	-	"	-	US\$ 1,532	N/A	US\$ 1,532	
	Halliburton Co.	-	"	-	US\$ 1,507	N/A	US\$ 1,507	
	Pfizer Inc.	-	"	-	US\$ 1,505	N/A	US\$ 1,505	
	Standard Chartered PLC	-	"	-	US\$ 1,491	N/A	US\$ 1,491	
	Suncor Energy, Inc.	-	"	-	US\$ 1,487	N/A	US\$ 1,487	
		-	"	-	US\$ 1,482	N/A	US\$ 1,482	

(Continued)



Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2016				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Caterpillar Financial Services Corp.	-	Available-for-sale financial assets	-	US\$ 1,000	N/A	US\$ 1,000	
	Nisource Finance Corp.	-	"	-	US\$ 996	N/A	US\$ 996	
	Georgia-Pacific LLC	-	"	-	US\$ 988	N/A	US\$ 988	
	Duke Realty LP	-	"	-	US\$ 972	N/A	US\$ 972	
	Texas Eastern Transmission, LP	-	"	-	US\$ 972	N/A	US\$ 972	
	Duke Energy Progress Inc.	-	"	-	US\$ 962	N/A	US\$ 962	
	Glaxosmithkline Cap. Inc.	-	"	-	US\$ 950	N/A	US\$ 950	
	Southern Electric Generating Company	-	"	-	US\$ 909	N/A	US\$ 909	
	Lockheed Martin Corp.	-	"	-	US\$ 904	N/A	US\$ 904	
	Svenska Handelsbanken AB (publ)	-	"	-	US\$ 891	N/A	US\$ 891	
	AXA Financial, Inc.	-	"	-	US\$ 886	N/A	US\$ 886	
	Federal Realty Invs Trust	-	"	-	US\$ 883	N/A	US\$ 883	
	Mastercard Inc.	-	"	-	US\$ 855	N/A	US\$ 855	
	Nucor Corporation	-	"	-	US\$ 843	N/A	US\$ 843	
	AXIS Specialty Finance PLC	-	"	-	US\$ 821	N/A	US\$ 821	
	Pacific LifeCorp	-	"	-	US\$ 816	N/A	US\$ 816	
	Bank Of Montreal	-	"	-	US\$ 812	N/A	US\$ 812	
	Societe Generale Group	-	"	-	US\$ 810	N/A	US\$ 810	
	Xylem Inc.	-	"	-	US\$ 809	N/A	US\$ 809	
	Manulife Financial Corporation	-	"	-	US\$ 804	N/A	US\$ 804	
	Cox Communications, Inc.	-	"	-	US\$ 791	N/A	US\$ 791	
	Koninklijke Philips N.V.	-	"	-	US\$ 786	N/A	US\$ 786	
	CMS Energy Corp.	-	"	-	US\$ 772	N/A	US\$ 772	
	Crown Castle Towers LLC	-	"	-	US\$ 758	N/A	US\$ 758	
	HCP Inc.	-	"	-	US\$ 751	N/A	US\$ 751	
	Southern Railway Co.	-	"	-	US\$ 741	N/A	US\$ 741	
	DTE Electric Company	-	"	-	US\$ 718	N/A	US\$ 718	
	Baker Hughes Incorporated	-	"	-	US\$ 714	N/A	US\$ 714	
	Regions Financial Corporation	-	"	-	US\$ 710	N/A	US\$ 710	
	Total Capital International S.A.	-	"	-	US\$ 703	N/A	US\$ 703	
	Continental Airlines Inc.	-	"	-	US\$ 700	N/A	US\$ 700	
	TTX Co.	-	"	-	US\$ 700	N/A	US\$ 700	
	Scentre Group	-	"	-	US\$ 699	N/A	US\$ 699	
	Air Lease Corporation	-	"	-	US\$ 696	N/A	US\$ 696	
	Cargill, Incorporated	-	"	-	US\$ 693	N/A	US\$ 693	
	Danske Bank A/S	-	"	-	US\$ 689	N/A	US\$ 689	
	Energy Louisiana, LLC	-	"	-	US\$ 676	N/A	US\$ 676	
	Ohio Power Company	-	"	-	US\$ 669	N/A	US\$ 669	
	National Retail Properties, Inc.	-	"	-	US\$ 663	N/A	US\$ 663	
	Capital One Financial Co.	-	"	-	US\$ 661	N/A	US\$ 661	
	Liberty Property LP	-	"	-	US\$ 638	N/A	US\$ 638	
	Grupo Bimbo, S.A.B. de C.V.	-	"	-	US\$ 637	N/A	US\$ 637	
	Potash Corp Saskatchewan Inc.	-	"	-	US\$ 637	N/A	US\$ 637	
	ABC Inc.	-	"	-	US\$ 621	N/A	US\$ 621	
	Life Technologies Corp.	-	"	-	US\$ 620	N/A	US\$ 620	
	Dr Pepper Stapples Group, Inc.	-	"	-	US\$ 614	N/A	US\$ 614	
	Kimberly Clark Corp.	-	"	-	US\$ 604	N/A	US\$ 604	
	Bayer US Finance LLC	-	"	-	US\$ 599	N/A	US\$ 599	
	CenterPoint Energy Resources	-	"	-	US\$ 594	N/A	US\$ 594	
	Host Hotels & Resorts, Inc.	-	"	-	US\$ 590	N/A	US\$ 590	

(Continued)







Held Company Name	Marketable Securities Type and Name	Relationship with the Company	Financial Statement Account	December 31, 2016				Note
				Shares/Units (In Thousands)	Carrying Value (Foreign Currencies in Thousands)	Percentage of Ownership (%)	Fair Value (Foreign Currencies in Thousands)	
TSMC Global	Clitgroup Commercial Mortgage Trust	-	Available-for-sale financial assets	-	US\$ 4,207	N/A	US\$ 4,207	
	Morgan Stanley Capital I Trust	-	"	-	US\$ 4,114	N/A	US\$ 4,114	
	Mercedes Benz Auto Receivables Trust	-	"	-	US\$ 3,699	N/A	US\$ 3,699	
	BMW Floorplan Master Owner Trust	-	"	-	US\$ 2,437	N/A	US\$ 2,437	
	Ford Credit Auto Lease Trust	-	"	-	US\$ 2,174	N/A	US\$ 2,174	
	Nissan Master Owner Trust Receivables Trust	-	"	-	US\$ 2,003	N/A	US\$ 2,003	
	Carmax Auto Owner Trust	-	"	-	US\$ 2,000	N/A	US\$ 2,000	
	Golden Credit Card Trust	-	"	-	US\$ 1,801	N/A	US\$ 1,801	
	Wheels SPV LLC	-	"	-	US\$ 1,690	N/A	US\$ 1,690	
	Wells Fargo Commercial Mortgage Trust	-	"	-	US\$ 1,295	N/A	US\$ 1,295	
	CFCRE Commercial Mortgage Trust	-	"	-	US\$ 1,083	N/A	US\$ 1,083	
	Enterprise Fleet Financing LLC	-	"	-	US\$ 798	N/A	US\$ 798	
	Structure product Bank of Tokyo-Mitsubishi UFJ	-	Held-to-maturity financial assets	-	US\$ 50,000	N/A	US\$ 49,993	
	Fund Primavera Capital Fund II L.P.	-	Financial assets carried at cost	-	US\$ 23,784	4	US\$ 23,784	
VTAF III	Common stock LiquidLeds Lighting Corp.	-	Financial assets carried at cost	1,600	US\$ 800	11	US\$ 800	
	Xenio Corporation	-	"	435	US\$ 453	3	US\$ 453	
	Accon Wireless Broadband Corp.	-	"	2,249	US\$ 315	6	US\$ 315	
	Preferred stock GTBF, Inc.	-	Financial assets carried at cost	1,154	US\$ 1,500	-	US\$ 1,500	
	Neocomix, Inc.	-	"	4,147	US\$ 170	-	US\$ 170	
	Common stock RichWave Technology Corp.	-	Available-for-sale financial assets	1,334	US\$ 2,378	2	US\$ 2,378	
VTAF II	Impinj, Inc.	-	"	62	US\$ 2,189	-	US\$ 2,189	
	Sentelic	-	Financial assets carried at cost	1,806	US\$ 2,607	8	US\$ 2,607	
	5V Technologies, Inc.	-	"	963	US\$ 2,168	2	US\$ 2,168	
	Aether Systems, Inc.	-	"	3,100	US\$ 339	30	US\$ 339	
	Preferred stock Aquantia	-	Financial assets carried at cost	4,643	US\$ 4,441	2	US\$ 4,441	
	Preferred stock Sonicx, Inc.	-	Financial assets carried at cost	230	-	3	-	
ISDF	Common stock Alchip Technologies Limited	-	Available-for-sale financial assets	6,581	US\$ 6,387	11	US\$ 6,387	
	Sonicx, Inc.	-	Financial assets carried at cost	278	-	4	-	
ISDF II	Preferred stock Sonicx, Inc.	-	Financial assets carried at cost	264	-	4	-	
	Common stock Innovium, Inc.	-	Financial assets carried at cost	221	US\$ 370	-	US\$ 370	
Growth Fund	Preferred stock Innovium, Inc.	-	Financial assets carried at cost	230	US\$ 384	-	US\$ 384	

(Concluded)

## Taiwan Semiconductor Manufacturing Company Limited and Investees

MARKETABLE SECURITIES ACQUIRED AND DISPOSED OF AT LEAST NT\$300 MILLION OR 20% OF THE PAID-IN CAPITAL FOR THE YEAR ENDED DECEMBER 31, 2016  
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Company Name	Marketable Securities Type and Name	Financial Statement Account	Counter-party	Nature of Relationship	Beginning Balance		Acquisition		Disposal		Gain/Loss on Disposal	Ending Balance (Note 1) Shares/Units (In Thousands)	Amount	
					Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount				
TSMC	Bank debentures HSBC Bank (Taiwan) Limited	Held-to-maturity financial assets	-	-	-	\$ 3,305,475	-	\$	\$ 3,300,000	-	\$	-	-	
	Corporate bond CPC Corporation, Taiwan	Held-to-maturity financial assets	-	-	-	1,543,723	-	1,513,743	1,075,000	-	-	-	1,967,303	
	Hon Hai Precision Ind. Co., Ltd.	"	-	-	-	1,003,858	-	-	600,000	-	-	-	400,250	
	Taiwan Power Company	"	-	-	-	1,207,601	-	-	1,000,000	-	-	-	200,848	
	Nan Ya Plastics Corporation	"	-	-	-	-	-	302,139	150,000	-	-	-	150,742	
	Structure product Hua Nan Commercial Bank	Held-to-maturity financial assets	-	-	-	2,000,000	-	-	2,000,000	-	-	-	-	
	Cathay United Bank	"	-	-	-	1,000,000	-	-	1,000,000	-	-	-	-	
	Commercial paper Taiwan Power Company	Held-to-maturity financial assets	-	-	-	-	945	9,426,884	800,000	-	-	-	865	8,628,176
	Stock TSMC Global	Investments accounted for using equity method	-	-	Subsidiary	5	203,425,723	2	64,451,983	-	-	-	7	265,634,729
	TSMC Nanjing VisEra Tech	"	-	VisEra Holding	Subsidiary	-	-	253,120	5,005,171	-	-	-	253,120	6,331,094
Xintec	"	-	VisEra Holding	Associate	92,778	2,209,785	18,504	678,348	-	-	-	111,282	2,599,807	
TSMC Global	Corporate bond Bank of America Corp.	Available-for-sale financial assets	-	-	-	US\$ 6,993	-	US\$ 25,862	US\$ 4,624	US\$ 4,532	US\$ 92	-	US\$ 27,973	
	JPMorgan Chase & Co.	"	-	-	-	US\$ 4,971	-	US\$ 28,534	US\$ 11,121	US\$ 10,999	US\$ 122	-	US\$ 22,330	
	Verizon Communications	"	-	-	-	US\$ 4,994	-	US\$ 12,385	-	-	-	-	US\$ 17,059	
	Citigroup Inc.	"	-	-	-	US\$ 2,986	-	US\$ 13,979	-	-	-	-	US\$ 16,819	
	Abbvie Inc.	"	-	-	-	-	-	US\$ 14,338	US\$ 251	US\$ 251	-	-	US\$ 13,850	
	AT&T Inc.	"	-	-	-	US\$ 3,882	-	US\$ 10,044	US\$ 384	US\$ 390	US\$ (6)	-	US\$ 13,332	
	Gilead Sciences Inc.	"	-	-	-	US\$ 1,000	-	US\$ 11,222	-	-	-	-	US\$ 11,850	
	Acema Inc.	"	-	-	-	-	-	US\$ 11,687	-	-	-	-	US\$ 11,618	
	Morgan Stanley	"	-	-	-	US\$ 1,005	-	US\$ 10,359	-	-	-	-	US\$ 11,237	
	Oracle Corp.	"	-	-	-	US\$ 2,428	-	US\$ 9,572	US\$ 1,447	US\$ 1,426	US\$ 21	-	US\$ 10,405	
Svenska Handelsbanken AB Teva Pharmaceuticals Netherlands	"	-	-	-	-	-	US\$ 9,922	US\$ 5,856	US\$ 5,987	US\$ (131)	-	-	US\$ 9,837	
								US\$ 14,629					US\$ 8,467	

(Continued)

Company Name	Marketable Securities Type and Name	Financial Statement Account	Counter-party	Nature of Relationship	Beginning Balance		Acquisition		Disposal		Ending Balance (Note 1)				
					Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount	Carrying Value	Gain/Loss on Disposal	Shares/Units (In Thousands)	Amount	
TSMC Global	BMW US Capital LLC	Available-for-sale financial assets	-	-	US\$	11,211	-	US\$	3,990	US\$	3,990	-	US\$	7,180	
	Wells Fargo & Company	"	-	-	US\$	9,706	-	US\$	6,008	US\$	5,967	41	US\$	6,127	
	Sysco Corporation	"	-	-	US\$	13,622	-	US\$	7,605	US\$	7,496	109	US\$	5,978	
	Shell International Fin.	"	-	-	US\$	9,752	-	US\$	5,234	US\$	5,234	(22)	US\$	5,713	
	Cisco Systems Inc.	"	-	-	US\$	13,545	-	US\$	8,079	US\$	8,007	72	US\$	5,511	
	US Bank NA Cincinnati	"	-	-	US\$	12,590	-	US\$	9,018	US\$	8,983	33	US\$	3,568	
	JPMorgan Chase & Co.	Held-to-maturity financial assets	-	-	US\$	143,533	-	-	-	-	-	-	-	US\$	153,147
	Wells Fargo & Company	"	-	-	US\$	150,008	-	-	-	-	-	-	-	US\$	150,007
	Westpac Banking Corp.	"	-	-	US\$	100,000	-	-	-	-	-	-	-	US\$	100,000
	Goldman Sachs Group, Inc.	"	-	-	US\$	100,000	-	-	-	-	-	-	-	US\$	100,000
	Commonwealth Bank of Australia	"	-	-	US\$	50,000	-	-	-	-	-	-	-	US\$	50,000
	National Australia Bank	"	-	-	US\$	50,000	-	-	-	-	-	-	-	US\$	50,000
	Bank of Nova Scotia	"	-	-	US\$	49,978	-	-	-	-	-	-	-	US\$	49,982
	Government bond	"	-	-	-	-	-	-	-	-	-	-	-	-	-
	US Treasury N/B	Available-for-sale financial assets	-	-	US\$	285,949	-	US\$	110,552	US\$	111,205	US\$	(653)	US\$	195,285
	US Treasury Floating Rate Note	"	-	-	US\$	104,729	-	US\$	74,021	US\$	73,990	US\$	31	US\$	30,756
	Treasury Inflation-Indexed N/B	"	-	-	US\$	19,492	-	US\$	12,938	US\$	12,963	US\$	(25)	US\$	19,349
	US Treasury N/B	"	-	-	US\$	27,040	-	US\$	14,698	US\$	14,698	US\$	1	US\$	13,842
	WI Treasury Securities	"	-	-	US\$	14,698	-	US\$	10,494	US\$	10,486	US\$	8	US\$	-
	Treasury Bill	"	-	-	US\$	10,486	-	US\$	-	US\$	-	US\$	-	US\$	-
	Agency bond	"	-	-	-	-	-	US\$	609	US\$	698	US\$	(89)	US\$	15,322
	Fed Hm Ln Pz Pool G60594	Available-for-sale financial assets	-	-	US\$	16,185	-	US\$	9,288	US\$	9,351	US\$	(63)	US\$	14,067
	Fmnia Pool AL9128	"	-	-	US\$	23,724	-	US\$	2,925	US\$	3,333	US\$	(408)	US\$	12,533
Fmnia Pool AL7191	"	-	-	US\$	9,855	-	US\$	516	US\$	584	US\$	(68)	US\$	9,462	
Fmnia Pool AL8430	"	-	-	US\$	10,171	-	US\$	2,292	US\$	2,619	US\$	(327)	US\$	9,281	
Fmnia Pool 888577	"	-	-	US\$	11,995	-	US\$	425	US\$	447	US\$	(22)	US\$	9,177	
Fed Hm Ln Pz Pool G18605	"	-	-	US\$	9,855	-	US\$	439	US\$	478	US\$	(39)	US\$	9,173	
Fed Hm Ln Pz Pool G60081	"	-	-	US\$	9,954	-	US\$	1,309	US\$	1,366	US\$	(57)	US\$	8,457	
Fmnia Pool AV5062	"	-	-	US\$	9,975	-	US\$	9,351	US\$	9,385	US\$	(34)	US\$	-	
Fed Hm Ln Pz Pool G60344	"	-	-	US\$	9,385	-	US\$	20,007	US\$	19,967	US\$	40	US\$	-	
Fmnia Pool AS8074	"	-	-	US\$	19,967	-	US\$	12,504	US\$	12,496	US\$	8	US\$	-	
Fed Home Ln Discount Nt.	"	-	-	US\$	12,496	-	US\$	16,006	US\$	15,978	US\$	28	US\$	-	
Fmnia Tba 15 Yr 2.5	"	-	-	US\$	11,998	-	US\$	-	US\$	-	US\$	-	US\$	-	
Corporate issued asset-backed securities	"	-	-	-	-	-	-	-	-	-	-	-	-	-	
Capital One Multi Asset Execution Trust	Available-for-sale financial assets	-	-	US\$	32,785	-	US\$	1,999	US\$	1,996	US\$	3	US\$	39,626	
Chase Issuance Trust	"	-	-	US\$	21,462	-	US\$	5,744	US\$	5,753	US\$	(9)	US\$	31,276	
Discover Card Execution Note Trust	"	-	-	US\$	17,060	-	US\$	6,104	US\$	6,152	US\$	(48)	US\$	23,076	
Citibank Credit Card Issuance Trust	"	-	-	US\$	19,801	-	US\$	6,850	US\$	6,843	US\$	7	US\$	22,585	
Bank of America Credit Card Trust	"	-	-	US\$	13,019	-	US\$	-	US\$	-	US\$	-	US\$	17,465	
Ford Credit Floorplan Master Owner Trust	"	-	-	US\$	9,465	-	US\$	3,459	US\$	3,460	US\$	(1)	US\$	11,944	

(Continued)

Company Name	Marketable Securities Type and Name	Financial Statement Account	Counter-party	Nature of Relationship	Beginning Balance		Acquisition		Disposal		Ending Balance (Note 1)	
					Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount	Shares/Units (In Thousands)	Amount
TSMC Global	Structure product Bank of Tokyo-Mitsubishi UFJ	Held-to-maturity financial assets	-	-	-	US\$ 50,000	-	US\$ -	-	-	-	US\$ 50,000
	Fund Primavera Capital Fund II L.P.	Financial assets carried at cost	-	-	-	US\$ 11,767	-	-	-	-	-	US\$ 23,784
	Money market fund Goldman Sachs US\$ Liquid Reserves Fund	Available-for-sale financial assets	-	-	199,144	US\$ 199,144	199,144	US\$ 199,144	-	-	-	-

Note 1: The ending balance includes the amortization of premium/discount on bonds investments, share of profits/losses of investees and other related adjustment.

Note 2: The Company restructured the organizational structure to simplify investment structure. Therefore, the acquisition amount was the carrying value of VisEra Holding's investment in VisEra Tech and Xintec, respectively.

(Concluded)



TABLE 5

## Taiwan Semiconductor Manufacturing Company Limited and Investees

ACQUISITION OF INDIVIDUAL REAL ESTATE PROPERTIES AT COSTS OF AT LEAST NT\$300 MILLION OR 20% OF THE PAID-IN CAPITAL FOR THE YEAR ENDED DECEMBER 31, 2016  
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Company Name	Types of Property	Transaction Date	Transaction Amount (Foreign Currencies in Thousands)	Payment Term	Counter-party	Nature of Relationships	Prior Transaction of Related Counter-party			Price Reference	Purpose of Acquisition	Other Terms
							Owner	Relationships	Transfer Date			
TSMC	Fab	April 15, 2015 to February 17, 2016	\$ 362,111	Monthly settlement by the construction progress and acceptance	Environetics Design Group Co., Ltd.	-	N/A	N/A	N/A	Bidding, price comparison and price negotiation	Manufacturing purpose	None
	Fab	September 17, 2015 to January 25, 2016	3,201,800	Monthly settlement by the construction progress and acceptance	DA CIN Construction Co., Ltd.	-	N/A	N/A	N/A	Bidding, price comparison and price negotiation	Manufacturing purpose	None
	Fab	November 20, 2015 to October 26, 2016	329,010	Monthly settlement by the construction progress and acceptance	TASA Construction Corporation	-	N/A	N/A	N/A	Bidding, price comparison and price negotiation	Manufacturing purpose	None
	Fab	December 10, 2015 to April 11, 2016	3,167,768	Monthly settlement by the construction progress and acceptance	Fu Tsu Construction Co., Ltd.	-	N/A	N/A	N/A	Bidding, price comparison and price negotiation	Manufacturing purpose	None
	Fab	December 31, 2015 to January 04, 2016	1,250,000	Monthly settlement by the construction progress and acceptance	China Steel Structure Co., Ltd.	-	N/A	N/A	N/A	Bidding, price comparison and price negotiation	Manufacturing purpose	None
	Fab	January 22, 2016 to January 25, 2016	750,000	Monthly settlement by the construction progress and acceptance	KEDGE Construction Co., Ltd.	-	N/A	N/A	N/A	Bidding, price comparison and price negotiation	Manufacturing purpose	None
TSMC Nanjing	Land use right Fab	June 16, 2016 June 30, 2016	RMB 160,521 RMB 899,997	100% payment Monthly settlement by the construction progress and acceptance	Nanjing Municipal Bureau of Land and Resources China Construction First Division Group Construction & Development Co., Ltd.	-	N/A	N/A	N/A	Bidding	Manufacturing purpose	None
	Fab	October 17, 2016	RMB 408,980	Monthly settlement by the construction progress and acceptance	Shanghai Baoye Group Co., Ltd.	-	N/A	N/A	N/A	Bidding, price comparison and price negotiation	Manufacturing purpose	None

## Taiwan Semiconductor Manufacturing Company Limited and Investees

TOTAL PURCHASES FROM OR SALES TO RELATED PARTIES OF AT LEAST NT\$100 MILLION OR 20% OF THE PAID-IN CAPITAL FOR THE YEAR ENDED DECEMBER 31, 2016

(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Company Name	Related Party	Nature of Relationships	Transaction Details			Abnormal Transaction		Notes/Accounts Payable or Receivable		Note
			Purchases/Sales	Amount (Foreign Currencies in Thousands)	% to Total	Payment Terms	Unit Price	Payment Terms	Ending Balance (Foreign Currencies in Thousands)	
TSMC	TSMC North America	Subsidiary	Sales	\$ 633,917,888	65	Net 30 days from invoice date (Note)	-	Note	\$ 85,874,678	67
	GUC	Associate	Sales	5,008,684	1	Net 30 days from the end of the month of when invoice is issued	-	-	931,787	1
	TSMC China	Subsidiary	Purchases	19,256,773	27	Net 30 days from the end of the month of when invoice is issued	-	-	(1,775,774)	6
	WaferTech	Indirect subsidiary	Purchases	8,531,562	12	Net 30 days from the end of the month of when invoice is issued	-	-	(1,303,795)	4
	VIS	Associate	Purchases	6,732,298	10	Net 30 days from the end of the month of when invoice is issued	-	-	(587,407)	2
	SSMC	Associate	Purchases	3,375,422	5	Net 30 days from the end of the month of when invoice is issued	-	-	(505,655)	2
TSMC North America	GUC	Associate of TSMC	Sales	842,301 (US\$ 26,098)	-	Net 30 days from invoice date	-	-	37,349 (US\$ 1,160)	-

Note: The tenor is 30 days from TSMC's invoice date or determined by the payment terms granted to its clients by TSMC North America.

## Taiwan Semiconductor Manufacturing Company Limited and Investees

RECEIVABLES FROM RELATED PARTIES AMOUNTING TO AT LEAST NT\$100 MILLION OR 20% OF THE PAID-IN CAPITAL  
DECEMBER 31, 2016  
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Company Name	Related Party	Nature of Relationships	Ending Balance (Foreign Currencies in Thousands)	Turnover Days (Note 1)	Overdue		Amounts Received in Subsequent Period	Allowance for Bad Debts
					Amount	Action Taken		
TSMC	TSMC North America GUC	Subsidiary Associate	\$ 86,675,335 931,787	41 52	\$ 5,767,087 593,265	- -	\$ 14,527,760 593,265	\$ - -
TSMC North America	TSMC	Parent company	200,701 (US\$ 6,233)	Note 2	-	-	-	-
TSMC China	TSMC	Parent company	1,775,774 (RMB 383,265)	31	-	-	-	-
	TSMC Nanjing	The same parent company	4,190,708 (RMB 904,476)	Note 2	-	-	-	-
TSMC Technology	TSMC	Parent company	209,112 (US\$ 6,494)	Note 2	-	-	-	-
WaferTech	TSMC	The ultimate parent of the Company	1,303,795 (US\$ 40,492)	42	-	-	-	-
	TSMC Development	Parent company	172,015 (US\$ 5,342)	Note 2	-	-	-	-

Note 1: The calculation of turnover days excludes other receivables from related parties.

Note 2: The ending balance is primarily consisted of other receivables, which is not applicable for the calculation of turnover days.

## Taiwan Semiconductor Manufacturing Company Limited and Investees

Names, Locations, and Related Information of Investees Over Which the Company Exercises Significant Influence (Excluding Information on Investment in Mainland China) for the Year Ended December 31, 2016  
(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Investor Company	Investee Company	Location	Main Businesses and Products	Original Investment Amount		Balance as of December 31, 2016		Net Income (Losses) of the Investee (Foreign Currencies in Thousands)	Share of Profits/Losses of Investee (Note 1) (Foreign Currencies in Thousands)	Note
				December 31, 2016 (Foreign Currencies in Thousands)	December 31, 2015 (Foreign Currencies in Thousands)	Shares (In Thousands)	Percentage of Ownership			
TSMC	TSMC Global	Tortola, British Virgin Islands	Investment activities	\$ 232,207,219	\$ 167,755,236	7	100	\$ 2,818,659	\$ 2,818,659	Subsidiary
	TSMC Partners	Tortola, British Virgin Islands	Investing in companies involved in the design, manufacture, and other related businesses in the semiconductor industry	31,456,130	31,456,130	988,268	100	2,145,629	2,145,629	Subsidiary
	VIS	Hsin-Chu, Taiwan	Research, design, development, manufacture, packaging, testing and sale of memory integrated circuits, LSI, VLSI and related parts	10,180,677	10,180,677	464,223	28	5,537,925	1,563,446	Associate
	SSMC	Singapore	Fabrication and supply of integrated circuits	5,120,028	5,120,028	314	39	4,921,406	1,909,013	Associate
	VisEra Tech	Hsin-Chu, Taiwan	Engaged in manufacturing electronic spare parts and in researching, developing, designing, manufacturing, selling, packaging and testing of color filter	5,005,171	-	253,120	87	661,562	229,712	Subsidiary
	TSMC North America	San Jose, California, U.S.A	Selling and marketing of integrated circuits and semiconductor devices	333,718	333,718	11,000	100	195,672	195,672	Subsidiary
	Xintec	Taoyuan, Taiwan	Wafer level chip size packaging service	1,988,317	1,309,969	111,282	41	2,599,807	(242,999)	Associate
	GUC	Hsin-Chu, Taiwan	Researching, developing, manufacturing, testing and marketing of integrated circuits	386,568	386,568	46,688	35	551,082	192,426	Associate
	VTAF II	Cayman Islands	Investing in new start-up technology companies	608,562	608,562	-	98	467,171	(85,702)	Subsidiary
	TSMC Europe	Amsterdam, the Netherlands	Marketing and engineering supporting activities	15,749	15,749	-	100	353,695	40,471	Subsidiary
	VTAF III	Cayman Islands	Investing in new start-up technology companies	1,355,417	1,499,452	-	98	219,350	(12,810)	Subsidiary
	TSMC Japan	Yokohama, Japan	Marketing activities	83,760	83,760	6	100	132,999	3,861	Subsidiary
	TSMC Korea	Seoul, Korea	Customer service and technical supporting activities	13,656	13,656	80	100	35,706	2,074	Subsidiary
	TSMC Solar Europe GmbH	Hamburg, Germany	Selling of solar related products and providing customer service	25,266	25,266	1	100	(6,328)	(7,810)	Subsidiary
VTA Holdings	Delaware, U.S.A	Investing in new start-up technology companies	-	844,775	-	7	-	-	Subsidiary	
Emerging Alliance	Cayman Islands	Investing in new start-up technology companies	-	394,674	-	-	-	(313)	Subsidiary	
Chi Chem	Taipei, Taiwan	Investment activities	Note 4	5,221,931	Note 4	Note 4	Note 4	1,612	Note 4	
Motech	New Taipei, Taiwan	Manufacturing and sales of solar cells, crystalline silicon solar cell, and test and measurement instruments and design and construction of solar power systems	Note 3	-	Note 3	Note 3	Note 3	93,030	Note 3	
TSMC Partners	TSMC Development	Delaware, U.S.A	Investment activities	18,898,843	18,898,843	-	100	27,109,843	Note 2	Subsidiary
	TSMC Technology	Delaware, U.S.A	Engineering support activities	(US\$ 586,939)	(US\$ 586,939)	-	100	(US\$ 841,947)	Note 2	Subsidiary
	ISDF II	Cayman Islands	Investing in new start-up technology companies	459,867	(US\$ 459,867)	-	97	(US\$ 543,177)	Note 2	Subsidiary
	TSMC Canada	Ontario, Canada	Engineering support activities	(US\$ 14,282)	(US\$ 14,282)	9,299	100	(US\$ 16,869)	Note 2	Subsidiary
	ISDF	Cayman Islands	Investing in new start-up technology companies	167,236	(US\$ 167,236)	2,300	97	(US\$ 195,721)	Note 2	Subsidiary
			74,058	(US\$ 74,058)	2,300	100	(US\$ 6,078)	Note 2	Subsidiary	
			(US\$ 2,300)	(US\$ 2,300)	583	97	(US\$ 5,228)	Note 2	Subsidiary	
			(US\$ 15,301)	(US\$ 15,301)	(US\$ 489)		(US\$ 15)	(US\$ 69)	Subsidiary	

(Continued)

Investor Company	Investee Company	Location	Main Businesses and Products	Original Investment Amount		Balance as of December 31, 2016			Net Income (Losses) of the Investee (Foreign Currencies in Thousands)	Share of Profits/Losses of Investee (Note 1) (Foreign Currencies in Thousands)	Note
				December 31, 2016 (Foreign Currencies in Thousands)	December 31, 2015 (Foreign Currencies in Thousands)	Shares (In Thousands)	Percentage of Ownership	Carrying Value (Foreign Currencies in Thousands)			
TSMC Partners	VisEra Holding	Cayman Islands	Investing in companies involved in the design, manufacturing, and other related businesses in the semiconductor industry	Note 5	\$ 4,868,630 (US\$ 151,204)	Note 5	Note 5	\$ 351,135 (US\$ 10,880)	Note 2	Note 5	
VTAF III	Growth Fund	Cayman Islands	Investing in new start-up technology companies	\$ 47,067 (US\$ 1,462)	47,067 (US\$ 1,462)	\$ 29,486 (US\$ 916)	100	3,901 (US\$ 121)	Note 2	Subsidiary	
	Mutual-Pak	New Taipei, Taiwan	Manufacturing of electronic parts, wholesaling and retailing of electronic materials, and researching, developing and testing of RFID	167,843 (US\$ 5,213)	167,843 (US\$ 5,213)	15,643	58	2,526 (US\$ 78)	Note 2	Subsidiary	
	VTA Holdings	Delaware, U.S.A	Investing in new start-up technology companies	-	-	-	62	-	Note 2	Subsidiary	
VTAF II	VTA Holdings	Delaware, U.S.A	Investing in new start-up technology companies	-	-	-	31	-	Note 2	Subsidiary	
TSMC Development	WaferTech	Washington, U.S.A	Manufacturing, selling, testing and computer-aided designing of integrated circuits and other semiconductor devices	-	-	293,637	100	5,785,335 (US\$ 179,674)	Note 2	Subsidiary	
VisEra Holding	VisEra Tech	Hsin-Chu, Taiwan	Engaged in manufacturing electronic spare parts and in researching, developing, designing, manufacturing, selling, packaging and testing of color filter	Note 5	3,028,916 (US\$ 94,069)	Note 5	Note 5	661,562 (US\$ 20,498)	Note 2	Note 5	
	Xintec	Taoyuan, Taiwan	Wafer level chip size packaging service	Note 5	195,864 (US\$ 6,083)	Note 5	Note 5	(636,819) (US\$ (19,732))	Note 2	Note 5	

Note 1: The share of profits/losses of investee includes the effect of unrealized gross profit on intercompany transactions.

Note 2: The share of profits/losses of the investee company is not reflected herein as such amount is already included in the share of profits/losses of the investor company.

Note 3: The Company has no longer served as Motech's board of director starting June 2016. As a result, the Company exercises no significant influence over Motech. Therefore, Motech is no longer accounted for using the equity method. Further, such investment was reclassified to available-for-sale financial assets.

Note 4: Chi Cheng was incorporated into TSMC in December 2016.

Note 5: In October 2016, VisEra Holding was incorporated into TSMC Partners, the subsidiary of TSMC.

(Concluded)



TABLE 9

## Taiwan Semiconductor Manufacturing Company Limited and Investees

INFORMATION ON INVESTMENT IN MAINLAND CHINA  
FOR TWELVE MONTHS ENDED DECEMBER 31, 2016

(Amounts in Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Investee Company	Main Businesses and Products	Total Amount of Paid-in Capital (RMB in Thousands)	Method of Investment	Accumulated Outflow of Investment from Taiwan as of January 1, 2016 (US\$ in Thousands)	Investment Flows		Accumulated Outflow of Investment from Taiwan as of December 31, 2016 (US\$ in Thousands)	Net Income (Losses) of the Investee Company	Percentage of Ownership	Share of Profits/Losses	Carrying Amount as of December 31, 2016	Accumulated Inward Remittance of Earnings as of December 31, 2016
					Outflow (US\$ in Thousands)	Inflow						
TSMC China	Manufacturing and selling of integrated circuits at the order of and pursuant to product design specifications provided by customers	\$ 18,939,667 (RMB 4,502,080)	Note 1	\$ 18,939,667 (US\$ 596,000)	\$ -	\$ -	\$ 18,939,667 (US\$ 596,000)	\$ 6,181,335	100%	\$ 6,094,460 (Note 2)	\$ 42,618,308	\$ -
TSMC Nanjing	Manufacturing and selling of integrated circuits at the order of and pursuant to product design specifications provided by customers	6,435,200 (RMB 1,366,240)	Note 1	-	6,435,200 (US\$ 200,000)	-	6,435,200 (US\$ 200,000)	939	100%	939 (Note 2)	6,331,094	-

Accumulated Investment in Mainland China as of December 31, 2016 (US\$ in Thousands)	Investment Amounts Authorized by Investment Commission, MOEA (US\$ in Thousands)	Upper Limit on Investment
\$ 25,374,867 (US\$ 796,000)	\$ 119,412,667 (US\$3,596,000)	Note 3

Note 1: TSMC directly invested US\$596,000 thousand in TSMC China and US\$200,000 thousands in TSMC Nanjing.

Note 2: Amount was recognized based on the audited financial statements.

Note 3: As the Company has obtained the certificate of being qualified for operating headquarters issued by Industrial Development Bureau, MOEA on August 2016, the upper limit on investment in mainland China pursuant to "Principle of Investment or Technical Cooperation in Mainland China" is not applicable.

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**Taiwan Semiconductor Manufacturing Company Limited****STATEMENT OF CASH AND CASH EQUIVALENTS****DECEMBER 31, 2016****(In Thousands of New Taiwan Dollars, Unless Specified Otherwise)**

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<b>Item</b>	<b>Description</b>	<b>Amount</b>
Cash		
Petty cash		\$ 330
Cash in banks		
Checking accounts and demand deposits		58,649,136
Foreign currency deposits	Including US\$484,702 thousand @32.199, JPY36,954,884 thousand @0.2775 and EUR5,746 thousand @34.30	26,058,971
Time deposits	From 2016.01.22 to 2017.12.30, interest rates at 0.19%-1.16%, including NT\$159,061,551 thousand and US\$53,700 thousand @32.199	160,811,637
Cash equivalents		
Repurchase agreements collateralized by corporate bonds	Expired by 2017.01.13 , interest rates at 0.5%-1.5%	2,361,250
Commercial paper	Expired by 2017.03.15 , interest rates at 0.61%-0.62%	<u>1,997,239</u>
 Total		 <u>\$ 249,878,563</u>

**Taiwan Semiconductor Manufacturing Company Limited**

**STATEMENT OF NOTES AND ACCOUNTS RECEIVABLE, NET**

**DECEMBER 31, 2016**

**(In Thousands of New Taiwan Dollars)**

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<b>Client Name</b>	<b>Amount</b>
Spreadtrum Communications, Inc.	\$ 9,368,967
MediaTek Inc.	5,097,068
Huawei Technologies Co., Ltd.	3,556,318
Sony Electronics Inc.	3,275,717
NXP Semiconductors N.V.	2,189,935
Analog Devices, Inc.	2,097,785
Others (Note 1)	<u>14,906,937</u>
	40,492,727
Less: Allowance for doubtful accounts	<u>(475,430)</u>
Total	<u>\$ 40,017,297</u>

Note 1: The amount of individual client included in others does not exceed 5% of the account balance.

Note 2: The accounts receivable past due over one year amounted to NT\$35 thousand for which the Company has recognized appropriate allowance for doubtful accounts.

**Taiwan Semiconductor Manufacturing Company Limited**

**STATEMENT OF RECEIVABLES FROM RELATED PARTIES**

**DECEMBER 31, 2016**

**(In Thousands of New Taiwan Dollars)**

---

<b>Client Name</b>	<b>Amount</b>
TSMC North America	\$ 85,874,678
Others (Note)	<u>970,892</u>
Total	<u>\$ 86,845,570</u>

Note: The amount of individual client included in others does not exceed 5% of the account balance.



**Taiwan Semiconductor Manufacturing Company Limited****STATEMENT OF INVENTORIES****DECEMBER 31, 2016****(In Thousands of New Taiwan Dollars)**

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<b>Item</b>	<b>Amount</b>	
	<b>Cost</b>	<b>Net Realizable Value</b>
Finished goods	\$ 8,324,267	\$ 22,312,989
Work in process	32,317,210	131,492,618
Raw materials	3,864,429	3,735,628
Supplies and spare parts	<u>1,998,440</u>	<u>2,009,039</u>
Total	<u>\$ 46,504,346</u>	<u>\$ 159,550,274</u>

## Taiwan Semiconductor Manufacturing Company Limited

STATEMENT OF CHANGES IN INVESTMENTS ACCOUNTED FOR USING EQUITY METHOD  
FOR THE YEAR ENDED DECEMBER 31, 2016  
(In Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Investees	Balance, January 1, 2016		Shares (In Thousands)	Amount	Decrease	Increase (Decrease) in Using the Equity Method (Note 3)	Adjustments to Share of Equity of Subsidiaries and Associates	Adjustments Arising from Changes in Percentage of Ownership in Subsidiaries	Adjustments Resulting from the Transactions with Subsidiaries and Associates	Effect of Merger of Subsidiary		Balance, December 31, 2016		Market Value or Net Assets Value Unit Price (NT\$)	Total Amount	Collateral
	Shares (In Thousands)	Amount								Shares (In Thousands)	Amount	Shares (In Thousands)	Amount			
<b>Stocks</b>																
TSMC Global	5	\$ 203,425,723	2	\$ 64,451,983	-	\$ (2,242,977)	\$ -	\$ -	\$ 8,105	-	-	7	\$ 9,656,634,729	\$ 265,634,729	NI	
TSMC Partners	988,268	50,827,318	-	-	-	1,270,904	822	7,037	-	-	988,268	100	51,749,210	51,749,210	NI	
VIS	464,223	8,446,054	-	-	-	358,049	2,281	-	-	-	464,223	28	8,806,384	26,089,360	NI	
SSMC	314	9,511,515	-	-	-	(2,347,999)	-	-	-	-	314	39	7,163,516	7,163,516	NI	
VisEn Tech	-	-	253,120	5,005,171	-	229,712	-	-	-	-	253,120	87	5,234,883	5,234,883	NI	
TSMC North America	11,000	4,234,685	-	-	-	105,618	-	-	-	-	11,000	100	4,340,303	4,340,303	NI	
Xinacc	92,778	2,209,785	18,504	678,348	-	(288,382)	56	-	(29,073)	-	111,282	41	2,599,807	3,622,227	NI	
GUC	46,688	1,152,335	-	-	-	50,925	(6)	-	-	-	46,688	35	1,174,181	3,664,997	NI	
TSMC Europe	6	330,664	-	-	-	23,031	-	-	-	-	6	100	353,695	353,695	NI	
TSMC Japan	80	127,453	-	-	-	5,546	-	-	-	-	80	100	132,999	132,999	NI	
TSMC Korea	1	35,231	-	-	-	475	-	-	-	-	1	100	35,706	35,706	NI	
TSMC Solar Europe GmbH	1	1,186	-	-	-	(7,514)	-	-	-	-	1	100	(6,238)	(6,238)	NI	
Chi Cheng	36,600	594,364	-	-	-	1,612	-	-	-	-	36,600	-	-	-	NI	
Moroch	58,320	2,053,862	-	-	-	83,921	-	-	-	-	58,320	-	-	-	NI	
Subtotal		282,249,872		20,135,802	(58,320)	(2,155,551)	18,068	(7,037)	(36,600)	(395,976)	-	-	347,219,285	368,065,270		
<b>Capital</b>																
TSMC China	-	402,347,742	-	-	-	2,350,193	-	-	33,373	-	-	100	42,618,308	42,850,549	NI	
TSMC Nanjing	-	-	-	6,435,200	-	(104,106)	-	-	-	-	100	100	6,331,094	6,331,094	NI	
VTAF II	-	554,240	-	-	-	(87,069)	-	-	-	-	-	98	467,171	467,171	NI	
VTAF III	-	385,834	-	-	-	(144,035)	-	-	-	-	-	98	219,350	219,350	NI	
VTA Holdings	-	-	-	-	-	-	-	-	-	-	-	7	-	-	NI	
VTA Alliance	-	440,901	-	-	-	(52,011)	-	-	-	-	-	-	-	-	NI	
Emerging Alliance	-	-	-	6,435,200	-	2,084,558	-	-	33,373	-	-	-	49,635,923	49,868,164	NI	
Subtotal		41,615,717		6,435,200	-	(144,035)	-	-	-	-	-	-	49,635,923	49,868,164		
<b>Total</b>		\$ 324,365,492		\$ 26,570,702	\$ (2,663,862)	\$ (672,521)	\$ 21,221	\$ 7,037	\$ 12,405	\$ (784,866)	-	-	\$ 396,855,208	\$ 417,933,434		

Note 1: The unit price is calculated by closing price of Gre Tai Securities Market as of December 30, 2016.

Note 2: The unit price is calculated by closing price of the Taiwan Stock Exchange as of December 30, 2016.

Note 3: Including share of profit or loss of subsidiaries and associates, share of other comprehensive income of subsidiaries and associates and cash dividends received from subsidiaries and associates.

## Taiwan Semiconductor Manufacturing Company Limited

## STATEMENT OF SHORT-TERM LOANS

DECEMBER 31, 2016

(In Thousands of New Taiwan Dollars, Unless Specified Otherwise)

Type	Balance, End of Year	Contract Period	Range of Interest Rates (%)	Loan Commitments	Collateral	Remark
Unsecured loans						
Bank Of America	\$ 8,693,730	2016.12.02-2017.01.03	0.87	US\$ 300,000	Nil	-
Citibank Taipei	7,888,755	2016.12.02-2017.01.13	0.93-1.03	US\$ 484,000	Nil	-
Sumitomo Mitsui Banking Corporation	5,956,815	2016.12.16-2017.01.19	1.03	US\$ 200,000	Nil	-
Mizuho Bank, Ltd.	5,795,820	2016.12.14-2017.01.17	0.985	US\$ 200,000	Nil	-
JPMorgan Chase Bank N.A.	5,795,820	2016.12.07-2017.01.19	0.95-1.02	US\$ 200,000	Nil	-
Crédit Agricole CIB	5,795,820	2016.12.19-2017.01.19	1.00	US\$ 200,000	Nil	-
The Bank Of Tokyo-Mitsubishi UFJ, Ltd.	5,795,820	2016.12.02-2017.01.03	0.91	US\$ 200,000	Nil	-
Citibank Taiwan	3,541,890	2016.12.02-2017.01.03	0.93	US\$ 110,000	Nil	-
Standard Chartered Bank	3,219,900	2016.11.23-2017.01.03	0.88	US\$ 450,000	Nil	-
BNP	2,253,930	2016.12.07-2017.01.09	0.93	US\$ 75,000	Nil	-
HSBC Taiwan	1,931,940	2016.12.23-2017.01.23	1.07	US\$ 70,000	Nil	-
HSBC	1,287,960	2016.12.23-2017.01.23	1.07	US\$ 55,000	Nil	-
	<u>\$ 57,958,200</u>					

**Taiwan Semiconductor Manufacturing Company Limited**

**STATEMENT OF PAYABLES TO RELATED PARTIES**

**DECEMBER 31, 2016**

**(In Thousands of New Taiwan Dollars)**

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<b>Vendor Name</b>	<b>Amount</b>
TSMC China	\$ 1,775,774
WaferTech, LLC	1,303,795
VIS	587,407
SSMC	505,655
Others (Note)	<u>667,370</u>
Total	<u>\$ 4,840,001</u>

Note: The amount of individual vendor in others does not exceed 5% of the account balance.

**Taiwan Semiconductor Manufacturing Company Limited****STATEMENT OF PAYABLES TO CONTRACTORS AND EQUIPMENT SUPPLIERS****DECEMBER 31, 2016****(In Thousands of New Taiwan Dollars)**

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<b>Vendor Name</b>	<b>Amount</b>
Applied Materials South East Asia Pte Ltd.	\$ 14,916,260
Lam Research International Sarl	5,256,320
ASML Hong Kong Ltd.	4,859,978
TOKYO Electron Ltd.	4,707,932
Others (Note)	<u>32,708,653</u>
Total	<u>\$ 62,449,143</u>

Note: The amount of individual vendor included in others does not exceed 5% of the account balance.



**Taiwan Semiconductor Manufacturing Company Limited****STATEMENT OF ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES****DECEMBER 31, 2016****(In Thousands of New Taiwan Dollars)**

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<b>Item</b>	<b>Amount</b>
Guarantee deposit	\$ 6,439,800
Receipts in advance	2,695,412
Utilities	2,043,240
Insurance expense	1,766,864
Research and development expense	1,458,825
Others (Note)	<u>14,216,328</u>
Total	<u>\$ 28,620,469</u>

Note: The amount of each item in others does not exceed 5% of the account balance.

## Taiwan Semiconductor Manufacturing Company Limited

STATEMENT OF BONDS PAYABLE  
DECEMBER 31, 2016  
(In Thousands of New Taiwan Dollars)

Bonds Name	Trustee	Issuance Date	Interest Payment Date	Coupon Rate (%)	Total Amount	Repayment paid	Amount			Collateral
							Balance, End of Year	Unamortized Premiums (Discounts)	Carrying Value	
Domestic unsecured bonds- 100-1										
- A	Mega International Commercial Bank Co., Ltd.	2011.09.28	on 09.28 annually	1.40	\$ 10,500,000	\$ 10,500,000	\$ -	\$ -	Bullet repayment	Nil
- B	Mega International Commercial Bank Co., Ltd.	2011.09.28	on 09.28 annually	1.63	7,500,000	-	-	7,500,000	Bullet repayment	Nil
Domestic unsecured bonds- 100-2										
- A	Mega International Commercial Bank Co., Ltd.	2012.01.11	on 01.11 annually	1.29	10,000,000	-	-	10,000,000	Bullet repayment	Nil
- B	Mega International Commercial Bank Co., Ltd.	2012.01.11	on 01.11 annually	1.46	7,000,000	-	-	7,000,000	Bullet repayment	Nil
Domestic unsecured bonds- 101-1										
- A	Mega International Commercial Bank Co., Ltd.	2012.08.02	on 08.02 annually	1.28	9,900,000	-	-	9,900,000	Bullet repayment	Nil
- B	Mega International Commercial Bank Co., Ltd.	2012.08.02	on 08.02 annually	1.40	9,000,000	-	-	9,000,000	Bullet repayment	Nil
Domestic unsecured bonds- 101-2										
- A	Taipei Fubon Commercial Bank Co., Ltd.	2012.09.26	on 09.26 annually	1.28	12,700,000	-	-	12,700,000	Bullet repayment	Nil
- B	Taipei Fubon Commercial Bank Co., Ltd.	2012.09.26	on 09.26 annually	1.39	9,000,000	-	-	9,000,000	Bullet repayment	Nil
Domestic unsecured bonds- 101-3										
- A	Taipei Fubon Commercial Bank Co., Ltd.	2012.10.09	on 10.09 annually	1.53	4,400,000	-	-	4,400,000	Bullet repayment	Nil
Domestic unsecured bonds- 101-4										
- A	Taipei Fubon Commercial Bank Co., Ltd.	2013.01.04	on 01.04 annually	1.23	10,600,000	-	-	10,600,000	Bullet repayment	Nil
- B	Taipei Fubon Commercial Bank Co., Ltd.	2013.01.04	on 01.04 annually	1.35	10,000,000	-	-	10,000,000	Bullet repayment	Nil
- C	Taipei Fubon Commercial Bank Co., Ltd.	2013.01.04	on 01.04 annually	1.49	3,000,000	-	-	3,000,000	Bullet repayment	Nil
Domestic unsecured bonds- 102-1										
- A	Taipei Fubon Commercial Bank Co., Ltd.	2013.02.06	on 02.06 annually	1.23	6,200,000	-	-	6,200,000	Bullet repayment	Nil
- B	Taipei Fubon Commercial Bank Co., Ltd.	2013.02.06	on 02.06 annually	1.38	11,600,000	-	-	11,600,000	Bullet repayment	Nil
- C	Taipei Fubon Commercial Bank Co., Ltd.	2013.02.06	on 02.06 annually	1.50	3,600,000	-	-	3,600,000	Bullet repayment	Nil
Domestic unsecured bonds- 102-2										
- A	Taipei Fubon Commercial Bank Co., Ltd.	2013.07.16	on 07.16 annually	1.50	10,200,000	-	-	10,200,000	Bullet repayment	Nil
- B	Taipei Fubon Commercial Bank Co., Ltd.	2013.07.16	on 07.16 annually	1.70	3,500,000	-	-	3,500,000	Bullet repayment	Nil
Domestic unsecured bonds- 102-3										
- A	Taipei Fubon Commercial Bank Co., Ltd.	2013.08.09	on 08.09 annually	1.34	4,000,000	-	-	4,000,000	Bullet repayment	Nil
- B	Taipei Fubon Commercial Bank Co., Ltd.	2013.08.09	on 08.09 annually	1.52	8,500,000	-	-	8,500,000	Bullet repayment	Nil
Domestic unsecured bonds- 102-4										
- A	Taipei Fubon Commercial Bank Co., Ltd.	2013.09.25	on 09.25 annually	1.35	1,500,000	1,500,000	-	-	Bullet repayment	Nil
- B	Taipei Fubon Commercial Bank Co., Ltd.	2013.09.25	on 09.25 annually	1.45	1,500,000	-	-	1,500,000	Bullet repayment	Nil
- C	Taipei Fubon Commercial Bank Co., Ltd.	2013.09.25	on 09.25 annually	1.60	1,400,000	-	-	1,400,000	Bullet repayment	Nil
- D	Taipei Fubon Commercial Bank Co., Ltd.	2013.09.25	on 09.25 annually	1.85	2,600,000	-	-	2,600,000	Bullet repayment	Nil
- E	Taipei Fubon Commercial Bank Co., Ltd.	2013.09.25	on 09.25 annually	2.05	5,400,000	-	-	5,400,000	Bullet repayment	Nil
- F	Taipei Fubon Commercial Bank Co., Ltd.	2013.09.25	on 09.25 annually	2.10	2,600,000	-	-	2,600,000	Bullet repayment	Nil
<b>TOTAL</b>					<b>\$ 166,200,000</b>	<b>\$ 12,000,000</b>	<b>\$ -</b>	<b>\$ 154,200,000</b>		

**Taiwan Semiconductor Manufacturing Company Limited**

**STATEMENT OF NET REVENUE**

**FOR THE YEAR ENDED DECEMBER 31, 2016**

**(In Thousands of New Taiwan Dollars, Unless Specified Otherwise)**

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<b>Item</b>	<b>Shipments (Piece) (Note)</b>	<b>Amount</b>
Wafer	9,604,226	\$ 897,955,740
Other		<u>38,431,551</u>
Net revenue		<u>\$ 936,387,291</u>

Note: 12-inch equivalent wafers.

**Taiwan Semiconductor Manufacturing Company Limited****STATEMENT OF COST OF REVENUE  
FOR THE YEAR ENDED DECEMBER 31, 2016  
(In Thousands of New Taiwan Dollars)**

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<b>Item</b>	<b>Amount</b>
Raw materials used	
Balance, beginning of year	\$ 2,813,029
Raw material purchased	32,811,307
Raw materials, end of year	(3,864,429)
Transferred to manufacturing or operating expenses	(6,984,906)
Others	(22,648)
Subtotal	<u>24,752,353</u>
Direct labor	13,355,882
Manufacturing expenses	<u>392,240,592</u>
Manufacturing cost	430,348,827
Work in process, beginning of year	52,251,863
Work in process, end of year	(32,317,210)
Transferred to manufacturing or operating expenses	<u>(7,557,644)</u>
Cost of finished goods	442,725,836
Finished goods, beginning of year	7,733,331
Finished goods purchased	37,927,662
Finished goods, end of year	(8,324,267)
Transferred to manufacturing or operating expenses	(8,020,109)
Scrapped	<u>(153,660)</u>
Subtotal	471,888,793
Others	<u>2,664,120</u>
 Total	 <u>\$ 474,552,913</u>

**Taiwan Semiconductor Manufacturing Company Limited****STATEMENT OF OPERATING EXPENSES  
FOR THE YEAR ENDED DECEMBER 31, 2016  
(In Thousands of New Taiwan Dollars)**

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<b>Item</b>	<b>Research and Development Expenses</b>	<b>General and Administrative Expenses</b>	<b>Selling Expenses</b>
Payroll and related expense	\$ 25,585,675	\$ 7,075,633	\$ 2,038,528
Depreciation expense	15,515,812	830,609	10,703
Consumables	15,161,280	261,522	4,779
Repair and maintenance expense	2,475,463	1,149,395	362
Moving expense	277,529	1,462,185	1,771
Patents	-	1,775,446	-
Management fees of the Science Park Administration	-	1,685,164	-
Commission	-	-	873,088
Others (Note)	<u>11,350,420</u>	<u>4,457,509</u>	<u>168,855</u>
Total	<u>\$ 70,366,179</u>	<u>\$ 18,697,463</u>	<u>\$ 3,098,086</u>

Note: The amount of each item in others does not exceed 5% of the account balance.



## Taiwan Semiconductor Manufacturing Company Limited

STATEMENT OF LABOR, DEPRECIATION AND AMORTIZATION BY FUNCTION  
FOR THE YEAR ENDED DECEMBER 31, 2016 AND 2015  
(In Thousands of New Taiwan Dollars, Unless Specified Otherwise)

	Year Ended December 31, 2016				Year Ended December 31, 2015			
	Classified as Cost of Revenue	Classified as Operating Expenses	Classified as Other Operating Income and Expenses	Total	Classified as Cost of Revenue	Classified as Operating Expenses	Classified as Other Operating Income and Expenses	Total
Labor cost (Note)								
Salary and bonus	\$ 47,718,885	\$ 32,054,821	\$ -	\$ 79,773,706	\$ 43,217,080	\$ 30,018,535	\$ -	\$ 73,235,615
Labor and health insurance	2,393,838	1,425,653	-	3,819,491	2,305,905	1,429,355	-	3,735,260
Pension	1,305,083	702,550	-	2,007,633	1,230,033	686,312	-	1,916,345
Others	1,692,141	847,878	-	2,540,019	1,493,771	789,657	-	2,283,428
	<u>\$ 53,109,947</u>	<u>\$ 35,030,902</u>	<u>\$ -</u>	<u>\$ 88,140,849</u>	<u>\$ 48,246,789</u>	<u>\$ 32,923,859</u>	<u>\$ -</u>	<u>\$ 81,170,648</u>
Depreciation	\$ 197,595,313	\$ 16,357,124	\$ 24,887	\$ 213,977,324	\$ 198,343,742	\$ 14,925,181	\$ 24,887	\$ 213,293,810
Amortization	<u>2,014,814</u>	<u>1,709,252</u>	<u>-</u>	<u>3,724,066</u>	<u>1,605,572</u>	<u>1,553,865</u>	<u>-</u>	<u>3,159,437</u>

Note: As of December 31, 2016 and 2015, the Company had 41,850 and 40,152 employees, respectively.