Vision, Mission, and Core Values

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

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

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.
Dear Shareholders,

2019 was a year of continued milestones for TSMC. We delivered a tenth consecutive year of record revenue even as we faced business headwinds from trade tensions between countries. Such tensions created greater uncertainty for our customers and impacted the end demand for products. Thanks to the strong demand coming to our industry-leading 7-nanometer (N7) technology, our revenue increased 1.3% year-over-year in US dollar terms in 2019, in contrast to the global semiconductor industry’s 12% year-over-year decline.

In 2019, we witnessed an acceleration of the deployment of 5G networks and smartphones in several major markets around the world. We expect a faster worldwide penetration of 5G smartphones with higher silicon content over the next several years. The need for higher power efficiency, speed and more complex functionalities in 5G smartphones will lead to increasing use of TSMC’s leading edge technologies. Therefore, we raised our 2019 capital spending to US$14.9 billion in order to meet this increased demand. We will continue to anticipate the growth that will follow.

We continued to work on the fundamentals of our business in 2019 by improving our quality systems to provide better service to our customers, enriching our R&D infrastructures, strengthening our IT architecture and security, and accelerating our technology differentiation.

By working consistently to provide the foundry industry’s most advanced technologies and to make it available to all the product innovators, TSMC continuously expands the pool of innovators who fuel the semiconductor industry growth.

In 2019, our N7, in its second year, continued to see strong adoption across a wide range of products, from mobile, high performance computing (HPC), Internet of Things (IoT) and automotive applications. Our new 7-nanometer Plus (N7+) technology also came to the world’s first high volume production with Extreme Ultraviolet (EUV) lithography technology. Together, this 7-nanometer family, N7 and N7+, represented 27% of our total wafer revenue in 2019.

Our 6-nanometer (N6) technology just entered risk production in the first quarter of 2020 and further extends our 7-nanometer family well into the future.

Our 5-nanometer (N5) technology, with extensive EUV adoption, will begin volume production in the first half of 2020. As the foundry industry’s most advanced solution, N5 is further expanding our customer product portfolio and increase our addressable markets.

Our 3-nanometer (N3) technology will be another full node stride from our N5 and offer the foundry industry’s best PPA technology when it is introduced.

Our proprietary wafer-level packaging solutions of InFO (Integrated Fan-Out) and CoWoS® (Chip on Wafer on Substrate) continue to see strong momentum. We are developing 3D chip stacking solutions, such as SoIC (System on Integrated Chip), to provide system level solutions for the industry.
Highlights of TSMC’s accomplishments in 2019:

- Total wafer shipments were 10.1 million 12-inch equivalent wafers as compared to 10.8 million 12-inch equivalent wafers in 2018.
- Advanced technologies (16-nanometer and beyond) accounted for 50 percent of total wafer revenue, up from 41 percent in 2018.
- We deployed 272 distinct process technologies, and manufactured 10,761 products for 499 customers.
- TSMC’s market share in the total semiconductor foundry segment increased to 52 percent in 2019 as compared to 51 percent in the previous year.

2019 Financial Performance

Consolidated revenue reached NT$1,069.99 billion, an increase of 3.7 percent over NT$1,031.47 billion in 2018. Net income was NT$345.26 billion and diluted earnings per share were NT$13.32. Both decreased 1.7 percent from the 2018 level of NT$351.13 billion net income and NT$13.54 diluted EPS.

TSMC generated net income of US$11.18 billion on consolidated revenue of US$34.63 billion, which decreased 4.0 percent and increased 1.3 percent respectively from the 2018 level of US$11.64 billion net income and US$34.20 billion consolidated revenue.

Gross profit margin was 46.0 percent compared with 48.3 percent in 2018, while operating profit margin was 34.8 percent compared with 37.2 percent a year earlier. Net profit margin was 32.3 percent, a decrease of 1.7 percentage points from 2018’s 34.0 percent.

To implement an earlier profit distribution to our shareholders, TSMC transitioned from annual cash dividend to quarterly cash dividend in 2019, and further raised its total cash dividend payments to NT$10.0 per share in 2019 from NT$8.0 a year ago.

Technological Developments

In 2019, we continued to increase our investment in R&D with a record US$2.96 billion to meet our customer needs and to extend our technology leadership.

Our N5 reached risk production in 2019 and will begin volume production in the first half of 2020. N5 is expected to broaden our customer product portfolio and expand our addressable markets as customers seek to establish leadership positions for their products.

In its second year of ramp, N7 received more than 100 customer product tape-outs by the end of 2019, while N7+ began volume production with EUV. Our N6 is on track for volume production before the end of 2020. N6 provides a clear migration path for next wave N7 products.

Leveraging our leadership at 28-nanometer, our 22ULP (ultra-low power) and 22ULL (ultra-low leakage) technologies both began volume production in 2019. 22ULL supports IoT and wearable device applications while 22ULP supports image processing, digital TVs, set-top boxes and other consumer products. We also extended our 16-nanometer offerings with 12FC+ and 16FC+ in 2019 to support customer needs in ultra-low-power applications.

TSMC’s advanced packaging solutions enable system integration with wafer level process, by seamless integration of front end wafer process and backend chip packaging. In 2019, we offered the 5th generation InFO solutions with finer interconnect line width and spacing to enable both mobile and high performance computing products. TSMC’s CoWoS® continued to integrate with larger interposer size for heterogeneous integration. We also are developing TSMC-SoIC® (System-on-Integrated Chip), an industry-leading 3D chip stacking solution that enables multiple chips in close proximity to deliver the best system performance.

TSMC’s ecosystem, Open Innovation Platform® (OIP), empowers our 499 distinct customers to unleash their innovations with fast time-to-market. In 2019, we continued to add partners to our OIP Cloud Alliance, which offers our customers to design in a safe and secure cloud environment. This cloud design environment significantly increases design productivity. We also worked with our ecosystem partners to expand our libraries and silicon IP portfolio to over 26,000 items in 2019. More than 10,600 technology files and over 360 process design kits, from 0.5-micron to 5-nanometer, are available to customers via TSMC-Online. We saw more than 100,000 customer downloads in 2019.

Corporate Social Responsibility

At TSMC, we are dedicated to sound corporate governance and pursue profitable growth. We also commit to the environment, society, and balancing the interests of all stakeholders. A sound corporate governance built upon our core values is the foundation of TSMC’s corporate social responsibility. As an important member of the global semiconductor industry, we recognize it is our responsibility to face up to the increasingly challenging global environment and lead by example.

In 2019, we established the Corporate Social Responsibility Executive Committee, led by Chairman. The Executive Committee will work with senior management across many key functions and the existing CSR committee to set our CSR strategy, and align with UN Sustainable Development Goals. Our focuses are driving actions on green manufacturing, creating an inclusive workplace for talent development, building a responsible supply chain and caring for the underprivileged. We will work hard to fulfill our role to pursue a sustainable future.

Honors and Awards

TSMC received recognition for achievements in innovation, corporate governance, sustainability, investor relations, business information disclosure and overall excellence in management from organizations including Forbes, Fortune Magazine, The Nikkei, CommonWealth Magazine, PricewaterhouseCoopers, RobecoSAM (S&P Global) and the Taiwan Stock Exchange. In technology innovations, the Company was ranked 10th in the number of patents applications in the US Patent & Trademark Office, and ranked 1st in top 100 patent applicants in Taiwan. In sustainability, we were chosen once again as a component of the Dow Jones Sustainability Indices, becoming the only semiconductor company to be selected for 19 consecutive years. TSMC was also ranked 10th in...
Corporate Knights 2019 “Global 100 Most Sustainable Corporations in the World Ranking”. Meanwhile, we remained a major component in both MSCI ESG and FTSE4Good Emerging Index. In investor relations, TSMC continued to receive multiple awards from Institutional Investor Magazine.

Outlook

We believe the significant communication advancement brought by 5G networks will unlock new usage models across many different types of connected end devices, and drive exponential growth of data. Together with the continuous innovations in algorithms, a smarter and more intelligent society emerges. Digital computation now becomes increasingly ubiquitous and demands massive computation power. Therefore we expect the development of 5G-related and HPC applications will drive strong demand for our advanced technologies in the next several years. With the most advanced technology and capacity, and the widest coverage of customers, TSMC is well-positioned to lead the industry to capture the growth.

Macroeconomic uncertainties over trade tensions between countries continued in 2020. TSMC will remain agile and work on the fundamentals of our business and further accelerate our technology differentiation. We will be everyone’s foundry and treat all customers equally and fairly. We will fiercely protect our intellectual property. We will conduct our business with the utmost integrity and uphold our Trinity of Strengths of technology leadership, manufacturing excellence and customers’ trust.

TSMC’s dedicated foundry business model, open innovation platform and our four core values of Integrity, Commitment, Innovation and Customer Trust, are what enable us to be everyone’s foundry. As we enter a new digital age, we will continue working closely with IC innovators around the world to create values and generate good returns to our shareholders. We are dedicated to sound corporate governance, fulfilling our responsibilities as a global corporate citizen and pursuing a sustainable future. We thank you for your trust and commitment to TSMC, and look forward to a prosperous future with our shareholders.

Company Profile

Established in 1987 and headquartered in Hsinchu Science Park, Taiwan, TSMC pioneered the pure-play foundry business model with an exclusive focus on manufacturing customers’ products. By choosing not to design, manufacture or market any semiconductor products under its own name, the Company ensures that it never competes with its customers. And so, the key to TSMC’s success has always been to enable its customers’ success. TSMC’s foundry business model has enabled the rise of the global fabless industry, and TSMC is now the world’s largest semiconductor foundry, manufacturing 10,761 different products using 272 distinct technologies for 499 different customers in 2019.

TSMC-manufactured semiconductors serve a global customer base that is large and diverse and includes a wide range of applications in the computer, communications, consumer, and industrial/standard segments. These products are used in a variety of end markets including mobile devices, high performance computing, automotive electronics and the Internet of Things (IoT). Strong diversification helps to smooth fluctuations in demand, which in turn helps TSMC maintain higher levels of capacity utilization and profitability, and generate healthy returns for future investment.

The annual capacity of the manufacturing facilities managed by TSMC and its subsidiaries exceeded 12 million 12-inch equivalent wafers in 2019. These facilities include three 12-inch wafer GIGAFAB® fabs, four 8-inch wafer fabs, and one 6-inch wafer fab – all in Taiwan – as well as one 12-inch wafer fab at a wholly owned subsidiary, TSMC Nanjing Company Limited, and two 8-inch wafer fabs at wholly owned subsidiaries, WaferTech in the United States and TSMC China Company Limited.

TSMC provides customer service, account management and engineering services through offices in North America, Europe, Japan, China, and South Korea. At the end of 2019, the Company and its subsidiaries employed more than 51,000 people worldwide.

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.

R&D Highlights in 2019

To meet our customer’s needs in today’s dynamic marketplace, TSMC is accelerating the pace of its innovation by offering leading-edge processes as well as a wide variety of specialty technologies to unleash their innovation. Many of our technological breakthroughs in materials, processing, and advanced lithography are enabling devices to be faster, smaller and more power efficient. In 2018, the Company developed or introduced a wide variety of technologies.

A summary of highlights is below:

- **Advanced Technology Highlights**
  5nm Fin Field-Effect Transistor (FinFET) (N5) technology is TSMC’s newest offering, and volume production began in the first half of 2020. Compared to 7nm FinFET (N7) technology, N5
technology offers about 15% speed improvement or about 30% power reduction. In addition, it is optimized upfront for both mobile and high performance computing applications. A performance-enhanced version of N5, 5nm FinFET Plus (N5P) is under development and design kits will be available in the next N5 revision in the second quarter of 2020. N5P technology provides about 20% faster speed than N7 technology or about 40% power reduction.

N7 technology is one of TSMC’s fastest technologies in volume production, and provides optimized manufacturing processes for both mobile computing applications and high performance computing components. N7 received a total of more than 100 customer product tape-outs by the end of 2019. In addition, 7nm FinFET plus (N7+) technology, the first commercially available EUV-enabled foundry process technology in the world, entered full-scale production in 2019 and delivered customer products to market in high volume.

6nm FinFET (N6) technology successfully completed product yield verification in 2019 and entered volume production in first quarter. N6 technology delivers about 18% higher logic transistor density than 7nm technology. As its design rules are compatible with N7 technology, N6 technology can significantly reduce customers’ product design cycle time and time-to-market.

**Specialty Technology Highlights**

16FF+ technology has begun production for customer applications in the automotive industry since 2017. 16FFC foundation IPs (intellectual properties) passed the Automotive Electronics 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. TSMC continues to develop more 7nm automotive foundation IPs, which completed AEC-Q100 Grade-2 qualification in the first quarter of 2020.

16FFC RF led the foundry to start volume production of the fifth generation (5G) mobile network chips for customers in the first half of 2018. This technology has been extended to the next generation wireless local area network (WLAN) 802.11ax and Millimeter Wave (mmWave) applications, as well as to wireless connectivity applications such as smartphones using the 5G mobile network. Continuing to advance16FFC RF technology, in 2019 TSMC not only delivered the world’s first FinFET device whose $f_t$ (cut-off frequency) can reach >300GHz but also completed the development of the world’s first and best FinFET device whose $f_{max}$ can reach >400GHz. This high-performance and cost-effective technology will be used in many applications such as radar sensing and AR/VR to reduce chip power consumption and die size and to enable SoC designs.

**Advanced Packaging Technology Highlights**

TSMC successfully developed InFO-PoP (Integrated Fan-Out Package-on-Package) technology which integrates 7nm SoC (System-on-Chip) and DRAM (dynamic random access memory) for advanced mobile device applications and delivered several customer products to market in high volume in 2019. In addition, InFO_oS (Integrated Fan-Out on Substrate) technology integrating multiple 7nm SoC chips began volume production in 2019.

CoWoS® (Chip on Wafer on Substrate) technology that heterogeneously integrates multiple 7nm SoC chips and the second generation high bandwidth memory (HBM2) on 2-reticle size silicon interposer successfully completed qualification in the third quarter of 2019 for high performance computing applications.
In 2019, TSMC maintained its leading position in the foundry segment of the global semiconductor industry, with an estimated market share of 52%, despite ongoing intense competition from both established players and relatively new entrants to the business. The Company’s strong market position stems in great part from its leadership in advanced process technologies. In 2019, 50% of TSMC’s wafer revenue came from advanced manufacturing processes – defined as geometries of 16nm and smaller – up from 41% in 2018.

TSMC estimates that the worldwide semiconductor market excluding memory was US$327 billion in revenue in 2019, representing a 2% decline from 2018. In the foundry segment of the semiconductor industry, total revenue was US$67 billion in 2019, flat from 2018.

TSMC’s back-to-back years of growth in the foundry segment were driven by relatively healthy market demand. However, for 2020, the COVID-19 pandemic brings about uncertainty on both supply and demand of the total semiconductor industry. Considering the potential impacts, TSMC forecasts the total semiconductor market excluding memory to be flat or to slightly decline. Over the longer term, however, fueled by increasing semiconductor content in electronic devices, continuing market share gains by fabless companies, gradual increases in integrated device manufacturer (IDM) outsourcing, and expanding in-house application-specific integrated circuits (ASIC) from systems companies, the Company expects its foundry segment revenue to outpace the mid-single digit compound annual growth rate projected for the overall semiconductor market excluding memory from 2019 through 2024.

As an upstream supplier in the semiconductor supply chain, the foundry segment is tightly correlated with the market health of the major platforms, including smartphone, high performance computing (HPC), Internet of Things (IoT), automotive, and digital consumer electronics (DCE).

**Smartphone**

Smartphone unit shipments, which were down for the first time in their history in 2018, declined again in 2019 by 2%, reflecting established high penetration in many developed countries and China. For 2020, with 5G commercialization accelerating, new 5G smartphones will likely shorten the overall replacement cycle. However, the COVID-19 pandemic may delay smartphone replacement. As a result, TSMC projects a high-single digit decline for smartphone market in 2020. Over the longer term, migration to 5G, together with improved performance, longer battery life, biosensors and more AI features, will all continue to propel new smartphone sales going forward.

Low-power IC is an essential requirement among handset manufacturers, and SoC design, in which TSMC is already the leader, is the preferred solution due to its optimized cost, power and form factor (device footprint and thickness) potential. The migration to advanced process technologies will continue to accelerate, spurred by the appetite for higher performance to run AI applications, various complex software routines and higher resolution video.
High Performance Computing (HPC)

The HPC platform includes PC, Tablets, Server, Base Station, and Game Console etc. Major HPC unit shipment fell by 4% in 2019, mainly due to the prolonged replacement cycle of consumer PCs, lower enterprise Server demand, and current-generation Game Consoles entering the tail of their product life cycle; while partially offset by 5G Base Station deployment and growing business PC demand.

HPC is projected to have a mid-single digit unit decline in 2020, impacted by COVID-19. Nevertheless, several factors are expected to drive demand in HPC platform, including continuous 5G Base Station deployment, rising Data Center AI Server demand, and next-generation Game Console launches. All these require higher performance and power-efficient CPUs, GPUs, NPUs, AI Accelerators, and related ASICs, which will drive the overall HPC platform towards richer silicon content and more advanced process technologies.

Internet of Things (IoT)

The Internet of Things (IoT) platform includes various kinds of connected devices, such as smart wearable, smart speaker, and surveillance system, etc. IoT unit shipments grew 25% in 2019, with Bluetooth earphone, smart watch, and smart speaker as the major growth drivers.

Looking into 2020, despite the impact of COVID-19, IoT unit shipments will grow mid-teens, thanks to continued growth momentum of Bluetooth earphone, smart watch, and smart speaker, and continued development of various applications. By adding more AI functions, IoT devices will drive more demand for more powerful yet lower power controllers, connectivity IC and sensors. TSMC offers high-performance yet low-power process technologies to enable customers’ competitiveness for winning the market.

Automotive

Automotive unit sales fell 5% in 2019, due to softened global economies. It is projected to decline again at low-teens in 2020 due to the COVID-19 pandemic and continued macro uncertainty.

Moving forward, TSMC expects richer semiconductor content requirement driven by EV (electrical vehicle), ADAS (Advanced Driver Assistance System) and Infotainment systems to fuel the demand for Processors, Sensors, Analog and Power ICs. TSMC offers various automotive process technologies to help customers win the automotive market.

Digital Consumer Electronics (DCE)

DCE unit shipments fell 7% in 2019. TVs and set-top boxes declined due to worldwide economic uncertainties, while MP3 players, digital cameras continued to be cannibalized by smartphones.

A continued drop in DCE is expected in 2020. Certain sub-segments such as 4K and 8K (UHD) TVs should achieve positive growth within the sector. In addition, AI functions such as picture quality improvement and voice control have continuously been incorporated in TVs. With its broad array of advanced technology offerings, TSMC expects to take advantage of these market trends.

TSMC’s Trinity of Strengths

TSMC’s growth has outperformed the overall semiconductor industry for all but two years since the company’s founding. We have been able to achieve this track record by unleashing the innovation of our customers. We do not compete with our customers but support them as they grow, and participate in their success as they flourish. Our ability to unleash innovation is rooted in our trinity of strengths: Technology Leadership, Manufacturing Excellence, and Customer Trust.

Each component of the trinity plays a critical part. Our Technology Leadership allows us to provide leading-edge technologies to serve the most advanced product designs, and also enables a broad portfolio of specialty processes offerings for a diverse spectrum of IC designers. Our Manufacturing Excellence offers customers the fastest time-to-volume for their products and gives us the flexible capacity to not only manufacture for the foundry segment’s largest customer base, but also to provide more capacity when their products succeed and begin to generate high demand. Finally, Customer Trust keeps the goals of TSMC and its customers aligned, because we do not believe long-term success is possible if our customers do not succeed.

Technology Leadership

As a semiconductor industry leader, TSMC provides the broadest range of advanced, specialty and advanced packaging technology services. Our technology offerings possess the breadth of specialty technologies to suit the needs of a broad array of customers, and our leading-edge technology development has the depth to give customers a head start in the next wave of fast-growing product segments. We commit considerable resources to maintain this competitive advantage in technology: In 2019, TSMC’s R&D spending totaled approximately US$2.96 billion, or 8.5% of revenues.

Comprehensive Technology Portfolio

[Diagram showing the comprehensive technology portfolio with various technologies and process nodes, such as MEMS, Embedded Flash, RF, Logic, Analog, High Voltage, BCD-Power IC, with indications of availability and in development status.]

- Available
- In Development
TSMC has focused its R&D efforts on enabling the Company to continually offer its customers first-to-market, leading-edge technologies and design solutions that contribute to their product success. In 2019, following the transfer to manufacturing of the N7+ technology and the successful risk production of 5nm technology, the Company’s R&D organization continued to fuel the pipeline of technological innovation needed to maintain industry leadership. While TSMC’s 3nm technology, the sixth generation of technology platform to make use of 3D transistors, continues full development, the Company has initiated the development of 2nm technology, a pioneering effort within the semiconductor industry, and at the same time, is progressing in research and exploratory studies for nodes beyond 2nm.

In addition to CMOS logic, TSMC conducts R&D on a wide range of other semiconductor technologies that provide the functionality required by customers for mobile SoC and other applications. Highlights in 2019 include:

- Process validation for System-on-Integrated Chips (TSMC-SoIC®), an innovative wafer-level package technology
- High-volume production of Gen-4 Integrated Fan-Out Package on Package (InFO-PoP) for mobile processor packaging
- Successful qualification of Gen-5 InFO-PoP advanced packaging technology for mobile applications and Gen-2 Integrated Fan-Out on Substrate (InFO_oS) for HPC applications
- Technical qualification of 28nm embedded Flash for high-performance mobile computing and high performance low-leakage platforms, was achieved for automobile electronics and micro controller units (MCU)
- Development of the latest-generation of CMOS image sensors of sub-micron pixel for mobile applications and embedded 3D metal-insulator-metal (MIM) high-density capacitors for global shutter and high dynamic-range sensor applications

TSMC’s Technology Development team also provides customers with comprehensive design support to optimize their design productivity and reduce their cycle time, enabling their products to go from the designer’s desk to the marketplace as quickly as possible. Our design support includes design flows for electronic design automation (EDA), silicon-proven IP building blocks, process design kits (PDKs), and technology files. By 2019, TSMC had provided customers more than different 10,600 tech files and 360 PDKs via TSMC-Online™, and there are more than 100,000 customer downloads of these files every year.

Manufacturing Excellence

TSMC served 499 active customers in 2019, and manufactured over 10,761 different products using 272 different technologies, making it the world’s most diversified and largest provider of logic IC capacity. TSMC’s unique manufacturing system is tailored to manage the diverse manufacturing requirements of each customer, product, and technology without compromising speed, precision, and flexibility to adapt to changing circumstances. At the same time, our people and systems deliver these results in the leanest and most efficient way possible to support TSMC’s profitability.

For each new technology node, TSMC has always been the first effective capacity provider in the foundry segment with the best yield and the fastest ramping speed, enabling customers’ early time to market. In recent years, TSMC has focused on advancing our fab operations from “automated” to “intelligent”. TSMC has integrated artificial intelligence, machine learning, expert systems, and advanced algorithms to build up an intelligent manufacturing environment. Intelligent manufacturing technologies are widely applied in scheduling and dispatching, employee productivity, equipment productivity, process and equipment control, quality defense, and robotic control in order to optimize quality, productivity, efficiency, and flexibility while maximizing cost effectiveness and accelerating overall innovation. TSMC has also integrated new applications such as intelligent mobile devices, IoT, and mobile robots, and combined with intelligent automated material handling systems (AMHS) to consolidate wafer manufacturing data collection and analysis, utilize manufacturing resource efficiently, and maximize manufacturing effectiveness. As a result, the system provides fast ramp-up, short cycle time, stable manufacturing, on-time delivery, and total quality satisfaction and offers great flexibility as well to quickly support customers’ urgent pull-in requests when needed.

Customer Trust

Customer Trust is deeply ingrained as one of TSMC’s four core values and is our keystone to unleashing innovation. It ensures that we win together with our customers in long-term relationships that last from one generation of technology to another. A critical foundation stone for customer trust is a commitment TSMC made when it first opened for business: to never compete with customers. As a result, TSMC does not design IC products, but chooses to focus all of its resources on serving as the trusted foundry partner for its customers.

The dedicated foundry business model gives TSMC a distinct advantage over IDM foundries which give priority to manufacturing its own IC products over those of its customers. Customers that work with TSMC will not need to be concerned that their products will compete with their foundry’s products in the marketplace. Nor will they need to worry that their capacity needs will take a back seat to the capacity needs of the IDM’s products.

TSMC’s engagement with customers begins at the earliest stages of R&D to understand their technology needs, and continues through to design support, mask making, manufacturing, and packaging and testing. Along the way, customers can call on the support of a dedicated customer service team, as well as 24-hour a day, seven-day-a-week access to real-time information through TSMC-Online, a suite of web-based applications that facilitates design, engineering, and logistics collaboration. From the fundamental tenets of TSMC’s business model to the fine-grained details of doing business together, customers can be assured that TSMC is committed to winning together with them.

TSMC Delivers Unrivalled Manufacturing Flexibility

**2019 total managed capacity reached over 12M 12-inch wafer equivalents**

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<thead>
<tr>
<th>Technologies</th>
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<th>Products</th>
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<td>272</td>
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GIGAFAB® 14
Fab 5
Fab 6
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, the Audit Committee and the 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.

Board of Directors

TSMC’s Board of Directors consists of nine distinguished members with a great breadth of experience as world-class business leaders or professionals. We deeply rely on them for their diverse knowledge, personal perspectives, and solid business judgment. Five of those nine members are Independent Directors: former British Telecommunications Chief Executive Officer, Sir Peter L. Bonfield; Co-Founder, Chairman Emeritus of the Acer Group, Mr. Stan Shih; former Chairman of National Performing Arts Center and former Advisor of Executive Yuan, R.O.C., Ms. Kok-Choo Chen; former Chairman of Applied Materials, Inc., Mr. Michael R. Splinter; and former Chief Executive Officer of Xilinx, Inc., Mr. Moshe N. Gavrielov. The number of Independent Directors exceeds 50% of the total number of Directors. There will be an election for one additional Independent Director at the 2020 Annual Shareholders’ Meeting. The Board approved the nomination of Mr. Yancey Hai (currently Chairman of Delta Electronics Inc.) as a candidate for Independent Director at its meeting in the first quarter of 2020.

TSMC’s Board is comprised of a diverse group of professionals from different backgrounds in industries, academia, law, etc. These professionals include citizens from Taiwan, Europe and the U.S. with world-class business operating experience, two of whom are female.

Inheriting the spirit of TSMC’s Founder, Dr. Morris Chang’s philosophy on corporate governance, under the leadership of Chairman Dr. Mark Liu and CEO & Vice Chairman Dr. C.C. Wei, TSMC’s Board of Directors takes a serious and forthright approach to its duties and is a dedicated, competent and independent Board.

The Board’s primary duty is to supervise the Company’s compliance with relevant laws and regulations, financial transparency, timely disclosure of material information, and maintaining of the highest integrity. TSMC’s Board of Directors strives to perform these responsibilities through its Audit Committee and the Compensation Committee, the hiring of a financial expert consultant for the Audit Committee, and coordination with our 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 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.
Vision

- To Uplift Society

Mission

- Integrity
- Strengthening Environmental Protection
- Caring for the Disadvantaged

Guiding Principles

Acting with Integrity: TSMC believes in acting ethically, following the law, and balancing the interests of all stakeholders. The Company endeavors to use the experience of developing a sustainable business to drive the industry and supply chain into a positive cycle and to act together with them as an uplifting force in society.

Integrity is the foremost of TSMC’s four core values. Our culture of integrity is encapsulated in TSMC’s Code of Ethics and Business Conduct, which applies to the Company and its subsidiaries. The Code requires that each employee bear a heavy personal responsibility to preserve and to protect TSMC’s ethical values and reputation and to comply with various applicable laws and regulations. Not only do we provide training on the Code to incoming employees, we perform regular promotion, and offer advanced training in subjects including corruption, proprietary information protection, and insider trading. Adherence to the code is enforced through annual self-assessments, internal auditing, and a number of whistleblowing channels including the functional head of Human Resources, the corporate Vice President overseeing the Ombudsmen system, or directly to the Chairman of the Board of Directors’ Audit Committee. Externally, we require all of our suppliers, vendors, and contractors to declare in writing that they will not engage in any fraud or any unethical conduct when dealing with us, our officers, or employees.

Strengthening Environmental Protection: TSMC strives to achieve environmental sustainability and continues to promote green fabs, green manufacturing, and green supply chains. The Company seeks the most efficient use of energy and resources and is committed to reducing waste and preventing pollution. TSMC is eager to share its environmental experience and expertise and aims to collaborate with government, academia, and all of society to address the challenges of climate change.

- In water conservation, we saved an additional 3.28 million metric tons of water through newly-adopted water conservation measures in 2019, far exceeding our target of 1.14 million metric tons.
- In waste reduction, we achieved a recycling rate of 96%, with less than 0.25% of waste sent to landfills, surpassing our targets of our targets of ≥95% and ≤1% respectively. In addition, we also completed the first electronic-grade sulfuric acid recycling pilot plant, advancing towards our goal of circular economy.
In energy conservation, our plan is to accumulate more than 5,000 GWh in energy savings from 2016 to 2030 with new conservation measures, and by the end of 2019, we conserved approximately 1,200 GWh, with 300 GWh in saved in 2019.

In greenhouse gas emissions, we reduced emission per unit of production (metric tons of carbon dioxide equivalents per 8-inch equivalent wafers mask layers) by 18% from our base year of 2010, beating our target of 16.5%.

In addition, TSMC’s process technologies also contribute significantly to the development of green electronics products. We support our IC design customers in providing 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 and indoor/outdoor solid state LED lighting, and “Energy Star” certified low standby AC-DC adaptors chips. By leveraging TSMC’s superior energy-efficient technologies, these chips are used for supporting sustainable city infrastructure, greener vehicles, smart grids, and more.

Caring for the Disadvantaged: TSMC believes in equality, justice, and a safe and prosperous society. The Company combines its resources with employee volunteer service to commit money, material and labor to the two main areas of “education” and “living”. TSMC hopes to provide underprivileged students in rural regions with diverse learning opportunities and to offer disadvantaged groups necessary aid and emergency relief for the common good of society.

The TSMC Charity Foundation was established in June 2017 to coordinate the company’s numerous volunteer programs and social engagement efforts, as well as to expand the scope of charity projects. The Foundation’s projects include supporting a network of hospitals around Taiwan providing care to elderly people living alone, working with the Ministry of Education to promote the traditional Chinese value of filial piety, and coordinating the diverse volunteer work of TSMC employees.

The TSMC Education and Culture Foundation was founded in 1998 to aid the educationally disadvantaged as well as to support public engagement with arts and culture. In 2019, the foundation spent nearly NT$97 million to sponsor multiple educational programs to address Taiwan’s urban/rural divide in education including scholarships, volunteer reading programs, and teacher training, as well as host performances by world-class artists at the Hsin-Chu Arts Festival, and foster interest in traditional arts with the TSMC Youth Calligraphy and Seal-carving Competition and the TSMC Youth Literature Competition.

The Company combines its resources with employee volunteer service to commit money, material and labor to the two main areas of “education” and “living”. TSMC hopes to provide underprivileged students in rural regions with diverse learning opportunities and to offer disadvantaged groups necessary aid and emergency relief for the common good of society.

Financial Statements

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries
Consolidated Condensed Balance Sheets
December 31, 2015 - 2019
In Millions of New Taiwan Dollars (NTD) and U.S. Dollars (USD)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASSETS</strong></td>
<td>USD</td>
<td>NTD</td>
<td>NTD</td>
<td>NTD</td>
<td>NTD</td>
</tr>
<tr>
<td><strong>Current Assets</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and Cash Equivalents</td>
<td>$15,186</td>
<td>495,399</td>
<td>$577,815</td>
<td>$553,392</td>
<td>$541,254</td>
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<tr>
<td>Investments in Marketable Financial Instruments</td>
<td>4,270</td>
<td>128,049</td>
<td>112,367</td>
<td>95,967</td>
<td>96,839</td>
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<td>Accounts Receivable</td>
<td>4,661</td>
<td>139,771</td>
<td>129,198</td>
<td>122,317</td>
<td>129,305</td>
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<tr>
<td>Inventories</td>
<td>2,767</td>
<td>82,981</td>
<td>103,231</td>
<td>73,881</td>
<td>48,682</td>
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<tr>
<td>Other Current Assets</td>
<td>548</td>
<td>16,414</td>
<td>24,089</td>
<td>11,646</td>
<td>7,633</td>
</tr>
<tr>
<td><strong>Total Current Assets</strong></td>
<td>27,432</td>
<td>822,814</td>
<td>951,680</td>
<td>853,202</td>
<td>817,729</td>
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<tr>
<td><strong>Non-current Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property, Plant and Equipment</td>
<td>45,097</td>
<td>1,352,377</td>
<td>1,072,093</td>
<td>1,062,543</td>
<td>997,778</td>
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<tr>
<td>Right-of-use, Intangible and Other Non-current Assets</td>
<td>1,989</td>
<td>59,642</td>
<td>37,093</td>
<td>30,547</td>
<td>24,794</td>
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<tr>
<td><strong>Total Non-current Assets</strong></td>
<td>47,086</td>
<td>1,412,019</td>
<td>1,109,186</td>
<td>1,102,940</td>
<td>1,022,520</td>
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<tr>
<td><strong>Total Assets</strong></td>
<td>74,518</td>
<td>2,264,805</td>
<td>2,060,128</td>
<td>1,991,862</td>
<td>1,886,455</td>
</tr>
<tr>
<td><strong>LIABILITIES AND SHAREHOLDERS’ EQUITY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current Liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short-term loans</td>
<td>$3,952</td>
<td>118,522</td>
<td>88,795</td>
<td>63,767</td>
<td>57,958</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>1,341</td>
<td>40,206</td>
<td>34,397</td>
<td>30,069</td>
<td>27,325</td>
</tr>
<tr>
<td>Payables to Contractors and Equipment Suppliers</td>
<td>4,696</td>
<td>140,811</td>
<td>43,134</td>
<td>55,724</td>
<td>63,154</td>
</tr>
<tr>
<td>Cash Dividends Payable</td>
<td>4,332</td>
<td>129,652</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Accrued Expenses and Other Current Liabilities</td>
<td>4,327</td>
<td>129,745</td>
<td>139,397</td>
<td>150,746</td>
<td>131,602</td>
</tr>
<tr>
<td>Current Portion of Bonds Payable and Bank Loans</td>
<td>5,060</td>
<td>31,800</td>
<td>34,900</td>
<td>58,401</td>
<td>38,110</td>
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<tr>
<td><strong>Total Current Liabilities</strong></td>
<td>19,609</td>
<td>540,756</td>
<td>340,543</td>
<td>358,870</td>
<td>318,230</td>
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<tr>
<td><strong>Non-current Liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Bonds Payable</td>
<td>837</td>
<td>25,100</td>
<td>56,900</td>
<td>91,800</td>
<td>153,094</td>
</tr>
<tr>
<td>Other Non-current Liabilities</td>
<td>896</td>
<td>26,874</td>
<td>13,189</td>
<td>18,595</td>
<td>25,071</td>
</tr>
<tr>
<td><strong>Total Non-current Liabilities</strong></td>
<td>1,733</td>
<td>51,974</td>
<td>70,089</td>
<td>110,395</td>
<td>178,165</td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td>21,432</td>
<td>620,329</td>
<td>412,632</td>
<td>469,265</td>
<td>496,494</td>
</tr>
<tr>
<td><strong>Equity Attributable to Shareholders of the Parent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Stock at Par Value</td>
<td>8,647</td>
<td>259,304</td>
<td>259,304</td>
<td>259,304</td>
<td>259,304</td>
</tr>
<tr>
<td>Capital Surplus</td>
<td>1,878</td>
<td>58,340</td>
<td>58,316</td>
<td>58,310</td>
<td>58,272</td>
</tr>
<tr>
<td>Legal Capital Reserve</td>
<td>10,376</td>
<td>311,147</td>
<td>276,034</td>
<td>241,723</td>
<td>208,298</td>
</tr>
<tr>
<td>Special Capital Reserve</td>
<td>356</td>
<td>10,675</td>
<td>26,907</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Unappropriated Earnings</td>
<td>33,730</td>
<td>1,011,513</td>
<td>1,079,706</td>
<td>991,639</td>
<td>863,710</td>
</tr>
<tr>
<td>Others</td>
<td>291</td>
<td>77,569</td>
<td>15,450</td>
<td>26,918</td>
<td>1,666</td>
</tr>
<tr>
<td><strong>Equity Attributable to Shareholders of the Parent</strong></td>
<td>54,069</td>
<td>1,621,410</td>
<td>1,676,817</td>
<td>1,522,038</td>
<td>1,389,248</td>
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<tr>
<td><strong>Noncontrolling Interests</strong></td>
<td>23</td>
<td>689</td>
<td>679</td>
<td>702</td>
<td>803</td>
</tr>
<tr>
<td><strong>Total Shareholders’ Equity</strong></td>
<td>54,092</td>
<td>1,622,099</td>
<td>1,677,496</td>
<td>1,522,780</td>
<td>1,390,051</td>
</tr>
<tr>
<td><strong>Total Liabilities &amp; Shareholders’ Equity</strong></td>
<td>74,524</td>
<td>2,264,805</td>
<td>2,090,128</td>
<td>1,991,862</td>
<td>1,886,455</td>
</tr>
</tbody>
</table>

Note: Amounts in New Taiwan dollars have been translated into U.S. dollars at the rate of NT$29.988 as of December 31, 2019.
Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries
Consolidated Condensed Statements of Comprehensive Income
For the Years Ended December 31, 2015 - 2019
In Millions of New Taiwan Dollars (NTD) and U.S. Dollars (USD), Except for Earnings Per Share

<table>
<thead>
<tr>
<th>Year</th>
<th>USD</th>
<th>NTD</th>
<th>2016</th>
<th>NTD</th>
<th>2015</th>
<th>NTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Revenue</td>
<td>$34,633</td>
<td>$1,069,985</td>
<td>$1,631,474</td>
<td>$977,447</td>
<td>$947,938</td>
<td>$843,497</td>
</tr>
<tr>
<td>Cost of Revenue</td>
<td>(18,686)</td>
<td>(577,288)</td>
<td>(533,660)</td>
<td>(482,641)</td>
<td>(397,125)</td>
<td>(431,102)</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>15,948</td>
<td>492,702</td>
<td>497,814</td>
<td>494,826</td>
<td>474,813</td>
<td>410,395</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research and Development Expenses</td>
<td>(2,959)</td>
<td>(91,419)</td>
<td>(85,895)</td>
<td>(80,733)</td>
<td>(71,226)</td>
<td>(65,545)</td>
</tr>
<tr>
<td>Sales, General and Administrative Expenses</td>
<td>(910)</td>
<td>(28,088)</td>
<td>(26,254)</td>
<td>(27,169)</td>
<td>(25,656)</td>
<td>(22,922)</td>
</tr>
<tr>
<td>Total Operating Expenses</td>
<td>(3,869)</td>
<td>(119,507)</td>
<td>(112,149)</td>
<td>(107,902)</td>
<td>(96,882)</td>
<td>(88,467)</td>
</tr>
<tr>
<td>Other Operating Income and Expenses</td>
<td>(16)</td>
<td>(4,990)</td>
<td>(2,101)</td>
<td>(1,365)</td>
<td>30</td>
<td>(1,880)</td>
</tr>
<tr>
<td>Income from Operations</td>
<td>12,062</td>
<td>372,701</td>
<td>383,624</td>
<td>385,519</td>
<td>377,958</td>
<td>320,548</td>
</tr>
<tr>
<td>Non-operating Income and Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of Profits of Associates and Joint Venture</td>
<td>92</td>
<td>2,944</td>
<td>3,068</td>
<td>2,986</td>
<td>3,493</td>
<td>4,132</td>
</tr>
<tr>
<td>Net Interest Income (Expenses)</td>
<td>419</td>
<td>12,939</td>
<td>11,643</td>
<td>6,134</td>
<td>3,011</td>
<td>895</td>
</tr>
<tr>
<td>Other Gains and Losses</td>
<td>4</td>
<td>1,262</td>
<td>851</td>
<td>1,624</td>
<td>1,495</td>
<td>25,310</td>
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<tr>
<td>Total Non-operating Income and Expenses</td>
<td>533</td>
<td>17,136</td>
<td>13,896</td>
<td>10,574</td>
<td>8,051</td>
<td>35,871</td>
</tr>
<tr>
<td>Income before Income Tax</td>
<td>12,618</td>
<td>399,845</td>
<td>397,510</td>
<td>396,133</td>
<td>389,999</td>
<td>350,429</td>
</tr>
<tr>
<td>Income Tax Expenses</td>
<td>(1,440)</td>
<td>(44,501)</td>
<td>(46,326)</td>
<td>(52,960)</td>
<td>(51,621)</td>
<td>(43,873)</td>
</tr>
<tr>
<td>Net Income</td>
<td>11,178</td>
<td>345,344</td>
<td>351,184</td>
<td>343,174</td>
<td>334,328</td>
<td>306,556</td>
</tr>
<tr>
<td>Other Comprehensive Income (Loss)</td>
<td>(383)</td>
<td>(11,824)</td>
<td>9,837</td>
<td>(28,822)</td>
<td>(11,061)</td>
<td>(14,714)</td>
</tr>
<tr>
<td>Comprehensive Income</td>
<td>$10,795</td>
<td>$333,520</td>
<td>$351,021</td>
<td>$314,325</td>
<td>$323,271</td>
<td>$291,842</td>
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</table>

Note: Amounts in New Taiwan dollars have been translated into U.S. dollars at the weighted average rate of NT$30.895 for the year ended December 31, 2019.

Taiwan Semiconductor Manufacturing Company Limited and Subsidiaries
Consolidated Condensed Cash Flow Statements
For the Years Ended December 31, 2015 - 2019
In Millions of New Taiwan Dollars (NTD) and U.S. Dollars (USD)

<table>
<thead>
<tr>
<th>Year</th>
<th>USD</th>
<th>NTD</th>
<th>2016</th>
<th>NTD</th>
<th>2015</th>
<th>NTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Flows from Operating Activities:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income Before Income Tax</td>
<td>$12,618</td>
<td>$389,845</td>
<td>$397,510</td>
<td>$396,133</td>
<td>$389,999</td>
<td>$350,429</td>
</tr>
<tr>
<td>Depreciation &amp; Amortization</td>
<td>9,266</td>
<td>286,884</td>
<td>292,546</td>
<td>266,143</td>
<td>223,808</td>
<td>222,506</td>
</tr>
<tr>
<td>Share of Profits of Associates and Joint Venture</td>
<td>(92)</td>
<td>(2,844)</td>
<td>(3,058)</td>
<td>(2,986)</td>
<td>(3,495)</td>
<td>(6,123)</td>
</tr>
<tr>
<td>Income Taxes Paid</td>
<td>(1,684)</td>
<td>(52,044)</td>
<td>(45,383)</td>
<td>(63,620)</td>
<td>(45,943)</td>
<td>(40,943)</td>
</tr>
<tr>
<td>Changes in Working Capital &amp; Others</td>
<td>(217)</td>
<td>(6,702)</td>
<td>(87,681)</td>
<td>(4,352)</td>
<td>(20,514)</td>
<td>2,019</td>
</tr>
<tr>
<td>Net Cash Generated by Operating Activities</td>
<td>19,911</td>
<td>475,135</td>
<td>573,954</td>
<td>508,218</td>
<td>507,820</td>
<td>529,879</td>
</tr>
<tr>
<td>Cash Flows from Investing Activities:</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Interest Received</td>
<td>466</td>
<td>16,875</td>
<td>14,460</td>
<td>9,526</td>
<td>6,353</td>
<td>3,642</td>
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<tr>
<td>Cash Dividend Received</td>
<td>66</td>
<td>2,039</td>
<td>3,421</td>
<td>4,911</td>
<td>5,816</td>
<td>4,054</td>
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<tr>
<td>Acquisitions of:</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property, Plant and Equipment</td>
<td>(14,900)</td>
<td>(460,422)</td>
<td>(311,582)</td>
<td>(330,588)</td>
<td>(328,045)</td>
<td>(275,517)</td>
</tr>
<tr>
<td>Marketable Financial Instruments</td>
<td>(6,351)</td>
<td>(257,997)</td>
<td>(99,017)</td>
<td>(102,508)</td>
<td>(116,901)</td>
<td>(41,574)</td>
</tr>
<tr>
<td>Financial Assets Carried at Cost</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proceeds from Disposal or Redemption of:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property, Plant and Equipment</td>
<td>10</td>
<td>287</td>
<td>181</td>
<td>336</td>
<td>98</td>
<td>317</td>
</tr>
<tr>
<td>Marketable Financial Instruments</td>
<td>8,000</td>
<td>247,212</td>
<td>89,159</td>
<td>87,460</td>
<td>40,518</td>
<td>74,293</td>
</tr>
<tr>
<td>Financial Assets Carried at Cost</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Investments Accounted for Using Equity Method</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>(220)</td>
<td>(6,796)</td>
<td>(7,091)</td>
<td>(3,518)</td>
<td>(2,705)</td>
<td>(3,886)</td>
</tr>
<tr>
<td>Net Cash Used in Investing Activities</td>
<td>(14,892)</td>
<td>(458,802)</td>
<td>(314,269)</td>
<td>(336,180)</td>
<td>(395,446)</td>
<td>(217,748)</td>
</tr>
<tr>
<td>Cash Flows from Financing Activities:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase in Short-term loans</td>
<td>1,029</td>
<td>31,804</td>
<td>23,923</td>
<td>10,394</td>
<td>10,969</td>
<td>3,139</td>
</tr>
<tr>
<td>Repayment of Bonds</td>
<td>(1,130)</td>
<td>(34,900)</td>
<td>(56,025)</td>
<td>(38,100)</td>
<td>(23,472)</td>
<td>-</td>
</tr>
<tr>
<td>Repayment of Long-term Bank Loans</td>
<td>(31)</td>
<td>(9)</td>
<td>(6)</td>
<td>(1)</td>
<td>(6)</td>
<td>(1)</td>
</tr>
<tr>
<td>Interest Paid</td>
<td>(114)</td>
<td>(3,597)</td>
<td>(3,233)</td>
<td>(3,480)</td>
<td>(3,961)</td>
<td>(3,156)</td>
</tr>
<tr>
<td>Cash Dividends Paid for Common Stock</td>
<td>(8,393)</td>
<td>(259,304)</td>
<td>(207,443)</td>
<td>(181,513)</td>
<td>(159,582)</td>
<td>(116,683)</td>
</tr>
<tr>
<td>Proceeds from Exercise of Stock Options</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>(118)</td>
<td>(5,642)</td>
<td>(3,364)</td>
<td>(2,964)</td>
<td>5,596</td>
<td>3,680</td>
</tr>
<tr>
<td>Net Cash Used in Financing Activities</td>
<td>(6,229)</td>
<td>(269,629)</td>
<td>(245,124)</td>
<td>(215,697)</td>
<td>(197,805)</td>
<td>(116,748)</td>
</tr>
<tr>
<td>Effect of Exchange Rate Changes on Cash and Cash Equivalents:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase (Decrease) in Cash and Cash Equivalents</td>
<td>(293)</td>
<td>(9,114)</td>
<td>9,862</td>
<td>(21,318)</td>
<td>(8,032)</td>
<td>8,341</td>
</tr>
<tr>
<td>Net Increase (Decrease) in Cash and Cash Equivalents</td>
<td>(3,902)</td>
<td>(122,416)</td>
<td>24,423</td>
<td>12,138</td>
<td>(21,435)</td>
<td>224,240</td>
</tr>
<tr>
<td>Cash and Cash Equivalents at Beginning of Period</td>
<td>18,702</td>
<td>377,815</td>
<td>553,392</td>
<td>541,254</td>
<td>562,689</td>
<td>358,449</td>
</tr>
<tr>
<td>Cash and Cash Equivalents at End of Period</td>
<td>$14,740</td>
<td>$455,398</td>
<td>$577,815</td>
<td>$553,392</td>
<td>$562,745</td>
<td>$562,689</td>
</tr>
</tbody>
</table>

Note: Amounts in New Taiwan dollars have been translated into U.S. dollars at the weighted average rate of NT$30.895 for the year ended December 31, 2019.
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TSMC’s depositary 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.nysc.com and http://msps.twse.com.tw

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