Letter to Shareholders

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 12FFC+ and 16FFC+ 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.

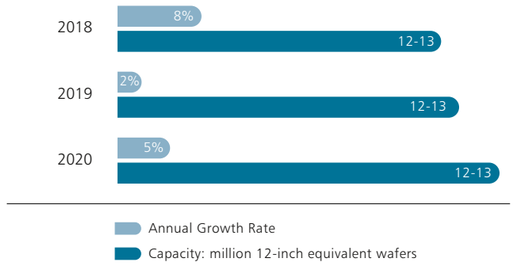
TSMC's ecosystem, Open Innovation Platform® (OIP), empowers our 499 distinct customers to unleash their innovations with fast time-to-market. In 2019, we continued to add partners to our OIP Cloud Alliance, which offers our customers to design in a safe and secure cloud environment. This cloud design 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

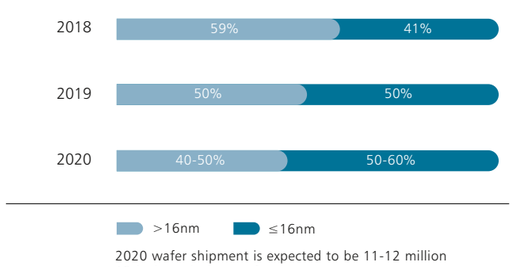
At TSMC, we are dedicated to sound corporate governance and pursue profitable growth. We also commit to the environment, society, and balancing the interests of all stakeholders. A sound corporate governance built upon our core values is the foundation of TSMC's corporate social responsibility. As an 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.

Capacity Plan



Wafer Sales Plan



2020 wafer shipment is expected to be 11-12 million 12-inch equivalent wafers.

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 *CorporateKnights* 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.

Mark Liu
Chairman

C.C. Wei
Chief Executive Officer