

2Q19

Quarterly Management Report  
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## Topics in This Report:

- Revenue Analysis
- Profit & Expense Analysis
- Financial Condition Review
- Cash Flow
- CapEx
- Recap of Recent Important Events & Announcements

**Operating Results Review:****Summary:***(Amounts are on consolidated basis and are in NT\$ billions unless otherwise noted)*

	<u>2Q19</u>	<u>1Q19</u>	<u>2Q18</u>	<u>QoQ</u>	<u>YoY</u>
EPS (NT\$ per common share)	2.57	2.37	2.79	8.7%	-7.6%
(US\$ per ADR unit)	0.41	0.38	0.47	8.7%	-7.6%
Net Revenue (US\$ billions)	7.75	7.10	7.85	9.2%	-1.4%
Net Revenue	241.00	218.70	233.28	10.2%	3.3%
Gross Profit	103.73	90.36	111.53	14.8%	-7.0%
<i>Gross Margin</i>	<i>43.0%</i>	<i>41.3%</i>	<i>47.8%</i>		
Operating Expenses	(27.17)	(26.02)	(26.44)	4.4%	2.7%
Other Operating Income and Expenses	(0.26)	(0.07)	(0.66)		
Operating Income	76.30	64.27	84.43	18.7%	-9.6%
<i>Operating Margin</i>	<i>31.7%</i>	<i>29.4%</i>	<i>36.2%</i>		
Non-Operating Items	4.25	3.91	3.16		
Net Income Attributable to Shareholders of the Parent Company	66.77	61.39	72.29	8.7%	-7.6%
<i>Net Profit Margin</i>	<i>27.7%</i>	<i>28.1%</i>	<i>31.0%</i>		
Wafer Shipment (kpcs 12 inch-equiv.)	2,308	2,205	2,674	4.7%	-13.7%

*Note: Diluted weighted average outstanding shares were 25,930mn units in 2Q19***Financial Highlights:****Second Quarter 2019**

- Net revenue was NT\$241.00 billion, representing a 10.2% increase from NT\$218.70 billion in 1Q19 and a 3.3% increase from NT\$233.28 billion in 2Q18.
- Gross margin was 43.0%, 1.7 percentage points higher than 1Q19 and 4.8 percentage points lower than 2Q18.
- Operating margin was 31.7%, up 2.3 percentage points from 1Q19 and down 4.5 percentage points from 2Q18.
- Non-operating items were a gain of NT\$4.25 billion, compared to a gain of NT\$3.91 billion in 1Q19 and a gain of NT\$3.16 billion in 2Q18.
- Net income attributable to shareholders of the parent company was NT\$66.77 billion, up 8.7% from 1Q19 and down 7.6% from 2Q18. Net profit margin was 27.7% and diluted EPS was NT\$2.57.

## I. Revenue Analysis

Wafer Revenue by Technology	2Q19	1Q19	2Q18
7nm	21%	22%	0%
10nm	3%	4%	13%
16nm	23%	16%	21%
20nm	1%	1%	4%
28nm	18%	20%	23%
40/45nm	11%	12%	11%
65nm	8%	8%	9%
90nm	3%	3%	5%
0.11/0.13um	2%	3%	2%
0.15/0.18um	8%	8%	9%
0.25um and above	2%	3%	3%

Net Revenue by Platform	2Q19	1Q19	2Q18
Smartphone	45%	47%	35%
High Performance Computing	32%	29%	40%
Internet of Things	8%	7%	7%
Automotive	5%	5%	6%
Digital Consumer Electronics	6%	7%	7%
Others	4%	5%	5%

Net Revenue by Geography	2Q19	1Q19	2Q18
North America	61%	60%	54%
Asia Pacific	10%	9%	9%
China	17%	18%	23%
EMEA	6%	7%	8%
Japan	6%	6%	6%

### Revenue Analysis:

In the second quarter, revenue increased 10.2% quarter-over-quarter, as the Company passed the bottom of the cycle of our business and began to see demand increases.

By technology, 7nm process technology contributed 21% of total wafer revenue in 2Q19. 10nm process technology contributed 3% while 16nm accounted for 23%. Advanced technologies (16nm and below) accounted for 47% of total wafer revenue.

By platform, revenue from Smartphone, HPC, IoT, and Automotive increased 5%, 23%, 15% and 3% respectively, while DCE and Others decreased 3% and 2% respectively.

From a geographic perspective, revenue from customers based in North America accounted for 61% of total net revenue, while revenue from Asia Pacific, China, EMEA (Europe, Middle East, and Africa) and Japan accounted for 10%, 17%, 6%, and 6% of total net revenue respectively.

## II. Profit & Expense Analysis

### II - 1. Gross Profit Analysis

(In NT\$ billions)	<u>2Q19</u>	<u>1Q19</u>	<u>2Q18</u>
<b>Cost of Revenue</b>	<b>137.27</b>	<b>128.34</b>	<b>121.75</b>
<b>Gross Profit</b>	<b>103.73</b>	<b>90.36</b>	<b>111.53</b>
<b>Gross Margin</b>	<b>43.0%</b>	<b>41.3%</b>	<b>47.8%</b>

### Gross Profit Analysis:

Gross margin was 43.0% in 2Q19, 1.7 percentage points higher than 1Q19, mainly attributable to the absence of photoresist defect material incident and a slightly more favorable foreign exchange rate.

## II - 2. Operating Income Analysis

(In NT\$ billions)	<u>2Q19</u>	<u>1Q19</u>	<u>2Q18</u>
<b>Total Operating Expenses</b>	<b>(27.17)</b>	<b>(26.02)</b>	<b>(26.44)</b>
Research & Development	(21.40)	(20.42)	(19.89)
SG&A	(5.77)	(5.60)	(6.55)
<b>Other Operating Income and Expenses</b>	<b>(0.26)</b>	<b>(0.07)</b>	<b>(0.66)</b>
<b>Operating Income</b>	<b>76.30</b>	<b>64.27</b>	<b>84.43</b>
<b>Operating Margin</b>	<b>31.7%</b>	<b>29.4%</b>	<b>36.2%</b>
<b>Total Operating Expenses as % of Net Revenue</b>	<b>11.2%</b>	<b>11.9%</b>	<b>11.3%</b>

### **Operating Income Analysis:**

Total operating expenses represented 11.2% of net revenue in 2Q19 and increased NT\$1.15 billion to NT\$27.17 billion, primarily driven by a higher level of development activities for 5nm technologies.

## II - 3. Non-Operating Items

(In NT\$ billions)	<u>2Q19</u>	<u>1Q19</u>	<u>2Q18</u>
<b>L-T Investments</b>	<b>0.63</b>	<b>0.43</b>	<b>0.27</b>
SSMC	0.19	0.12	0.36
Others	0.44	0.31	(0.09)
<b>Net Interest Income (Expenses)</b>	<b>3.68</b>	<b>3.51</b>	<b>2.94</b>
<b>Other Gains and Losses</b>	<b>(0.06)</b>	<b>(0.03)</b>	<b>(0.05)</b>
<b>Total Non-Operating Items</b>	<b>4.25</b>	<b>3.91</b>	<b>3.16</b>

### **Non-Operating Items:**

Total non-operating items were a gain of NT\$4.25 billion in 2Q19, compared to a gain of NT\$3.91 billion in 1Q19.

## II - 4. Net Profit and EPS

(In NT\$ billions)	<u>2Q19</u>	<u>1Q19</u>	<u>2Q18</u>
<b>Income before Tax</b>	<b>80.55</b>	<b>68.18</b>	<b>87.59</b>
<b>Income Tax Expenses</b>	<b>(13.77)</b>	<b>(6.79)</b>	<b>(15.30)</b>
<b>Effective Tax Rate</b>	<b>17.2%</b>	<b>10.0%</b>	<b>17.5%</b>
<b>Net Income Attributable to the Parent Company</b>	<b>66.77</b>	<b>61.39</b>	<b>72.29</b>
<b>Net Profit Margin</b>	<b>27.7%</b>	<b>28.1%</b>	<b>31.0%</b>
<b>EPS (NT\$ per common share)</b>	<b>2.57</b>	<b>2.37</b>	<b>2.79</b>

### **Net Profit and EPS:**

Net income attributable to shareholders of the parent company was NT\$66.77 billion, up 8.7% from 1Q19 and down 7.6% from 2Q18. The higher income tax expenses during the second quarter mainly reflected the 5% tax on undistributed retained earnings.

### III. Financial Condition Review

<b>III - 1. Liquidity Analysis</b>			
<b>(Balance Sheet Items)</b>			
(In NT\$ billions)	<b><u>2Q19</u></b>	<b><u>1Q19</u></b>	<b><u>2Q18</u></b>
Cash & Marketable Securities	764.62	760.25	748.92
Accounts Receivable	116.13	106.74	88.20
Inventories	108.23	108.68	99.03
Other Current Assets	21.20	15.66	22.89
<b>Total Current Assets</b>	<b>1,010.18</b>	<b>991.33</b>	<b>959.04</b>
Short-term Loans	78.26	76.59	30.84
Accounts Payable	103.60	104.64	70.26
Current Portion of Bonds Payable and Bank Loans	48.10	48.10	15.90
Dividends Payable	259.38	0.00	207.52
Accrued Liabilities and Others	132.92	148.94	138.48
<b>Total Current Liabilities</b>	<b>622.26</b>	<b>378.27</b>	<b>463.00</b>
Current Ratio (x)	1.6	2.6	2.1
<b>Net Working Capital</b>	<b>387.92</b>	<b>613.06</b>	<b>496.04</b>

#### **Liquidity Analysis:**

At the end of 2Q19, cash and marketable securities increased by NT\$4.37 billion to NT\$764.62 billion, as cash increased by NT\$4.03 billion and marketable securities increased by NT\$0.34 billion.

Total current liabilities increased by NT\$243.99 billion, mainly reflecting the accrual of NT\$259.38 billion for cash dividends, partially offset by the decrease of income tax payable.

Net working capital was NT\$387.92 billion and current ratio was 1.6x.

<b>III - 2. Receivable/Inventory Days</b>			
(In Number of Days)	<b><u>2Q19</u></b>	<b><u>1Q19</u></b>	<b><u>2Q18</u></b>
Days of Receivable	42	49	38
Days of Inventory	76	79	74

#### **Receivable and Inventory Days:**

Days of receivable decreased 7 days to 42 days in the second quarter.

Days of inventory decreased 3 days to 76 days, primarily attributable to lower days in work-in-process inventories and finished goods. Both of which resulted from higher shipments of inventories built in 1Q19.

<b>III - 3. Debt Service</b>			
(In NT\$ billions)	<b><u>2Q19</u></b>	<b><u>1Q19</u></b>	<b><u>2Q18</u></b>
Cash & Marketable Securities	764.62	760.25	748.92
Interest-Bearing Debts	<b>(161.66)</b>	<b>(159.99)</b>	<b>(130.14)</b>
<b>Net Cash Reserves</b>	<b>602.96</b>	<b>600.26</b>	<b>618.78</b>

#### **Debt Service:**

Net cash reserves increased NT\$2.70 billion to NT\$602.96 billion in 2Q19, mainly due to the increase in cash and marketable securities, partially offset by the increase in short-term loans.

## IV. Cash Flow

<b>IV - 1. Quarterly Cash Flow Analysis</b>			
(In NT\$ billions)	<u>2Q19</u>	<u>1Q19</u>	<u>2Q18</u>
Income before Tax	80.55	68.18	87.59
Depreciation & Amortization	75.05	77.55	71.41
Other Operating Sources/(Uses)	(37.84)	6.94	(29.23)
<b>Net Operating Sources/(Uses)</b>	<b>117.76</b>	<b>152.67</b>	<b>129.77</b>
Capital Expenditures	(116.35)	(75.94)	(59.68)
Marketable Financial Instruments	(3.35)	7.16	(3.36)
Other Investing Sources/(Uses)	4.98	4.59	2.97
<b>Net Investing Sources/(Uses)</b>	<b>(114.72)</b>	<b>(64.19)</b>	<b>(60.07)</b>
Increase (Decrease) in Short-term Loans	1.06	(12.26)	(27.97)
Other Financing Sources/(Uses)	(1.99)	(10.15)	(1.38)
<b>Net Financing Sources/(Uses)</b>	<b>(0.93)</b>	<b>(22.41)</b>	<b>(29.35)</b>
<b>Exchange Rate Changes</b>	<b>1.92</b>	<b>1.79</b>	<b>14.10</b>
<b>Cash Position Net Changes</b>	<b>4.03</b>	<b>67.86</b>	<b>54.45</b>
<b>Ending Cash Balance</b>	<b>649.70</b>	<b>645.67</b>	<b>632.23</b>

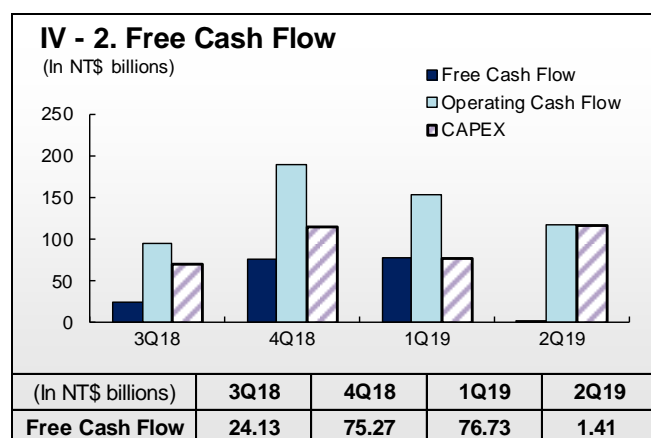
### **Summary of Cash Flow:**

During the second quarter, cash generated from operating activities totaled NT\$117.76 billion, including (1) NT\$80.55 billion from income before tax, (2) NT\$75.05 billion from depreciation & amortization expenses, and (3) NT\$37.84 billion for other operating uses, which included income tax payment of NT\$37.59 billion.

Net cash used in investing activities was NT\$114.72 billion in 2Q19, primarily including capital expenditures of NT\$116.35 billion.

Net cash used in financing activities was NT\$0.93 billion.

As a result, cash position increased NT\$4.03 billion to NT\$649.70 billion at the end of 2Q19.



### **Operating and Free Cash Flow:**

Free cash flow decreased NT\$75.32 billion to NT\$1.41 billion in 2Q19, as a result of higher capital expenditures and lower operating cash flow during the quarter.

## V. CapEx

<b>V. Capital Expenditures</b>			
(in US\$ billions)	<u>2Q19</u>	<u>1Q19</u>	<u>YTD</u>
<b>Capital Expenditures</b>	<b>3.75</b>	<b>2.46</b>	<b>6.21</b>

### **Capital Expenditures:**

Capital expenditures for TSMC on a consolidated basis totaled US\$3.75 billion in 2Q19.

## VI. Recap of Recent Important Events & Announcements

- TSMC Sets September 19 as Ex-Dividend Date, September 25 as the record date and October 17 as the distribution date for First Quarter 2019 Cash Dividend ( 2019/07/09 )
- Ambiq Micro Achieves World-Leading Power Consumption Performance with TSMC 40ULP Technology ( 2019/07/02 )
- TSMC Research Highlighted at 2019 Symposia on VLSI Technology & Circuits ( 2019/06/06 )
- TSMC Shareholders Approve 2018 Cash Dividend of NT\$8 and By-Elect Mr. Moshe N. Gavrielov as an Independent Director; Board of Directors Approve NT\$2 Cash Dividend for 2019 Q1 ( 2019/06/05 )
- TSMC Strengthens OIP Cloud Alliance with New Partner and New Solution Enablement ( 2019/04/26 )
- TSMC Celebrates 25th Anniversary of the North American Technology Symposium ( 2019/04/23 )