

3Q17

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>3Q17</u>	<u>2Q17</u>	<u>3Q16</u>	<u>QoQ</u>	<u>YoY</u>
EPS (NT\$ per common share)	3.47	2.56	3.73	35.7%	-7.1%
(US\$ per ADR unit)	0.57	0.42	0.59	35.7%	-7.1%
Net Revenue	252.11	213.86	260.41	17.9%	-3.2%
Gross Profit	125.88	108.71	132.05	15.8%	-4.7%
Gross Margin	49.9%	50.8%	50.7%		
Operating Expenses	(27.54)	(25.37)	(25.84)	8.6%	6.6%
Other Operating Income and Expenses	(0.28)	(0.08)	0.05		
Operating Income	98.06	83.26	106.26	17.8%	-7.7%
Operating Margin	38.9%	38.9%	40.8%		
Non-Operating Items	2.46	2.86	1.99		
Net Income Attributable to Shareholders of the Parent Company	89.93	66.27	96.76	35.7%	-7.1%
Net Profit Margin	35.7%	31.0%	37.2%		
Wafer Shipment (kpcs 12 inch-equiv.)	2,744	2,533	2,638	8.3%	4.0%

*Note: Diluted weighted average outstanding shares were 25,930mn units in 3Q17***Financial Highlights:****Third Quarter 2017**

- Net revenue was NT\$252.11 billion, representing a 17.9% increase from NT\$213.86 billion in 2Q17 and a 3.2% decrease from NT\$260.41 billion in 3Q16.
- Gross margin was 49.9%, 0.9 percentage point lower than 2Q17 and 0.8 percentage point lower than 3Q16.
- Operating margin was 38.9%, flat with 2Q17 and down 1.9 percentage points from 3Q16.
- Non-operating items were a gain of NT\$2.46 billion, compared to a gain of NT\$2.86 billion in 2Q17 and a gain of NT\$1.99 billion in 3Q16.
- Net income attributable to shareholders of the parent company was NT\$89.93 billion, up 35.7% from 2Q17 and down 7.1% from 3Q16. Net profit margin was 35.7% and diluted EPS was NT\$3.47.

## I. Revenue Analysis

Wafer Revenue by Application	3Q17	2Q17	3Q16
Computer	10%	8%	8%
Communication	56%	58%	60%
Consumer	9%	9%	11%
Industrial/Standard	25%	25%	21%

Wafer Revenue by Technology	3Q17	2Q17	3Q16
10nm	10%	1%	0%
16/20nm	24%	26%	31%
28nm	23%	27%	24%
40/45nm	12%	13%	13%
65nm	10%	10%	11%
90nm	5%	5%	5%
0.11/0.13um	3%	3%	3%
0.15/0.18um	10%	11%	9%
0.25um and above	3%	4%	4%

Net Revenue by Geography	3Q17	2Q17	3Q16
North America	64%	59%	68%
Asia Pacific	10%	14%	15%
China	11%	11%	6%
EMEA	8%	8%	6%
Japan	7%	8%	5%

### Revenue Analysis:

In the third quarter, revenue increased 17.9% quarter-over-quarter, primarily attributable to major mobile product launches and a generally healthy demand environment, including cryptocurrency mining. By application, Communication, Computer, Consumer and Industrial/Standard increased 10%, 46%, 15% and 13% respectively.

By technology, 10nm process technology contributed 10% of total wafer revenue in 3Q17. The combined 16/20nm contribution was 24% of total wafer revenue. Advanced technologies (28nm and below) accounted for 57% of total wafer revenue.

From a geographic perspective, revenue from customers based in North America accounted for 64% of total net revenue, while revenue from Asia Pacific, China, EMEA (Europe, Middle East, and Africa) and Japan accounted for 10%, 11%, 8%, and 7% of total net revenue, respectively.

## II. Profit & Expense Analysis

II - 1. Gross Profit Analysis			
(In NT\$ billions)	3Q17	2Q17	3Q16
<b>Cost of Revenue</b>	<b>126.23</b>	<b>105.15</b>	<b>128.36</b>
<b>Gross Profit</b>	<b>125.88</b>	<b>108.71</b>	<b>132.05</b>
<b>Gross Margin</b>	<b>49.9%</b>	<b>50.8%</b>	<b>50.7%</b>

### Gross Profit Analysis:

Gross margin was 49.9% in 3Q17, 0.9 percentage point lower than 2Q17, mainly attributable to margin dilution from higher 10nm contribution, partially balanced by a higher level of capacity utilization.

## II - 2. Operating Income Analysis

(In NT\$ billions)	<u>3Q17</u>	<u>2Q17</u>	<u>3Q16</u>
<b>Total Operating Expenses</b>	<b>(27.54)</b>	<b>(25.37)</b>	<b>(25.84)</b>
Research & Development	(21.05)	(19.06)	(18.72)
SG&A	(6.49)	(6.31)	(7.12)
<b>Other Operating Income and Expenses</b>	<b>(0.28)</b>	<b>(0.08)</b>	<b>0.05</b>
<b>Operating Income</b>	<b>98.06</b>	<b>83.26</b>	<b>106.26</b>
<b>Operating Margin</b>	<b>38.9%</b>	<b>38.9%</b>	<b>40.8%</b>
<b>Total Operating Expenses as % of Net Revenue</b>	<b>10.9%</b>	<b>11.9%</b>	<b>9.9%</b>

### **Operating Income Analysis:**

Total operating expenses were 10.9% of net revenue in 3Q17, a decline of 1 percentage point from 11.9% in 2Q17, despite a higher level of development activities for 5nm technologies. Operating margin remained at the same level as 2Q17 at 38.9%.

## II - 3. Non-Operating Items

(In NT\$ billions)	<u>3Q17</u>	<u>2Q17</u>	<u>3Q16</u>
<b>L-T Investments</b>	<b>0.75</b>	<b>0.62</b>	<b>0.88</b>
SSMC	0.45	0.43	0.52
Others	0.30	0.19	0.36
<b>Net Interest Income (Expenses)</b>	<b>1.28</b>	<b>1.64</b>	<b>0.70</b>
<b>Other Gains and Losses</b>	<b>0.43</b>	<b>0.60</b>	<b>0.41</b>
<b>Total Non-Operating Items</b>	<b>2.46</b>	<b>2.86</b>	<b>1.99</b>

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

Total non-operating items were a gain of NT\$2.46 billion in 3Q17, compared to a gain of NT\$2.86 billion in 2Q17.

## II - 4. Net Profit and EPS

(In NT\$ billions)	<u>3Q17</u>	<u>2Q17</u>	<u>3Q16</u>
<b>Income before Income Tax</b>	<b>100.52</b>	<b>86.12</b>	<b>108.25</b>
<b>Income Tax Expenses</b>	<b>(10.57)</b>	<b>(19.85)</b>	<b>(11.46)</b>
<b>Effective Tax Rate</b>	<b>10.6%</b>	<b>23.2%</b>	<b>10.7%</b>
<b>Net Income Attributable to the Parent Company</b>	<b>89.93</b>	<b>66.27</b>	<b>96.76</b>
<b>Net Profit Margin</b>	<b>35.7%</b>	<b>31.0%</b>	<b>37.2%</b>
<b>EPS (NT\$ per common share)</b>	<b>3.47</b>	<b>2.56</b>	<b>3.73</b>

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

Net income attributable to shareholders of the parent company was NT\$89.93 billion, up 35.7% from 2Q17 and down 7.1% from 3Q16. The quarter-over-quarter change was partially attributable to the lower effective tax rate in 3Q17.

### III. Financial Condition Review

<b>III - 1. Liquidity Analysis</b>			
<b>(Balance Sheet Items)</b>			
(In NT\$ billions)	<b><u>3Q17</u></b>	<b><u>2Q17</u></b>	<b><u>3Q16</u></b>
Cash & Marketable Securities	501.78	658.95	516.95
Accounts Receivable	118.73	110.33	129.29
Inventories	73.89	61.01	53.88
Other Current Assets	10.46	7.76	9.47
<b>Total Current Assets</b>	<b>704.86</b>	<b>838.05</b>	<b>709.59</b>
Short-term Loans	54.43	54.74	37.65
Accounts Payable	76.96	75.99	84.77
Current Portion of Bonds Payable and Bank Loans	59.07	79.87	38.11
Dividends Payable	0.00	181.63	0.00
Accrued Liabilities and Others	108.06	131.28	97.03
<b>Total Current Liabilities</b>	<b>298.52</b>	<b>523.51</b>	<b>257.56</b>
Current Ratio (x)	2.4	1.6	2.8
<b>Net Working Capital</b>	<b>406.34</b>	<b>314.54</b>	<b>452.03</b>

#### **Liquidity Analysis:**

At the end of 3Q17, cash and marketable securities decreased by NT\$157.17 billion to NT\$501.78 billion, primarily due to the payment of NT\$181.63 billion cash dividends and the repayment of NT\$28.10 billion of corporate bonds, partially offset by free cash flow of NT\$55.07 billion generated during the quarter.

Total current liabilities decreased by NT\$224.99 billion, largely attributable to the cash dividend payment during the quarter, repayment of corporate bonds, and decrease in accrued liabilities which includes payment of 2017 provisional income tax.

Net working capital was NT\$406.34 billion and current ratio was 2.4x.

<b>III - 2. Receivable/Inventory Days</b>			
(In Number of Days)	<b><u>3Q17</u></b>	<b><u>2Q17</u></b>	<b><u>3Q16</u></b>
Days of Receivable	42	47	42
Days of Inventory	53	52	44

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

Days of receivable decreased to 42 days in 3Q17.

Days of inventory increased 1 day from 52 days in 2Q17 to 53 days in 3Q17.

<b>III - 3. Debt Service</b>			
(In NT\$ billions)	<b><u>3Q17</u></b>	<b><u>2Q17</u></b>	<b><u>3Q16</u></b>
Cash & Marketable Securities	501.78	658.95	516.95
Interest-Bearing Debts	<b>(205.32)</b>	<b>(233.93)</b>	<b>(227.92)</b>
<b>Net Cash Reserves</b>	<b>296.46</b>	<b>425.02</b>	<b>289.03</b>

#### **Debt Service:**

Net cash reserves decreased NT\$128.56 billion to NT\$296.46 billion in 3Q17, mainly due to the decrease of NT\$157.17 billion in cash & marketable securities, partially balanced by the repayment of NT\$28.10 billion of corporate bonds.

## IV. Cash Flow

<b>IV - 1. Quarterly Cash Flow Analysis</b>			
(In NT\$ billions)	<b>3Q17</b>	<b>2Q17</b>	<b>3Q16</b>
Income before Income Tax	100.52	86.12	108.25
Depreciation & Amortization	71.16	57.99	56.27
Other Operating Sources/(Uses)	(54.90)	(40.71)	(38.11)
<b>Total Operating Sources/(Uses)</b>	<b>116.78</b>	<b>103.40</b>	<b>126.41</b>
Capital Expenditures	(61.71)	(105.19)	(103.78)
Marketable Financial Instruments	(7.54)	5.18	(8.91)
Other Investing Sources/(Uses)	3.59	1.79	5.80
<b>Net Investing Sources/(Uses)</b>	<b>(65.66)</b>	<b>(98.22)</b>	<b>(106.89)</b>
Increase (Decrease) in Short-term Loans	0.00	(0.04)	0.00
Cash Dividends	(181.51)	0.00	(155.58)
Other Financing Sources/(Uses)	(31.28)	(0.60)	(13.61)
<b>Net Financing Sources/(Uses)</b>	<b>(212.79)</b>	<b>(0.64)</b>	<b>(169.19)</b>
<b>Exchange Rate Changes</b>	<b>(0.72)</b>	<b>1.20</b>	<b>(8.72)</b>
<b>Net Cash Position Changes</b>	<b>(162.39)</b>	<b>5.74</b>	<b>(158.39)</b>
<b>Ending Cash Balance</b>	<b>408.08</b>	<b>570.47</b>	<b>463.97</b>

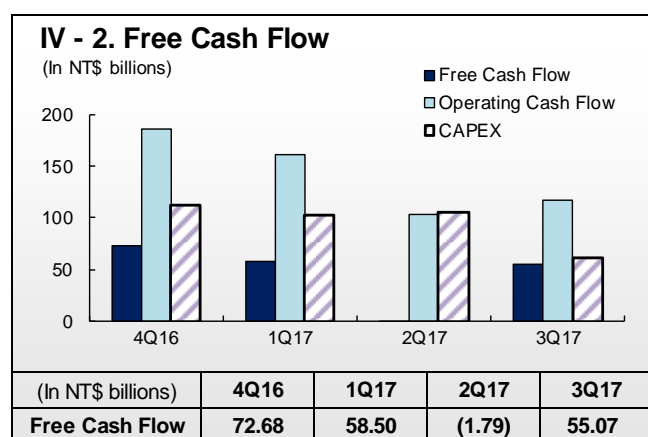
### Summary of Cash Flow:

During the third quarter, cash generated from operating activities totaled NT\$116.78 billion, including (1) NT\$100.52 billion from income before income tax, (2) NT\$71.16 billion from depreciation & amortization expenses and (3) NT\$54.90 billion for other operating uses, which included the payment of NT\$23.75 billion for 2017 provisional income tax and the payment of 2016 employee profit sharing of NT\$21.97 billion.

Net cash used in investing activities was NT\$65.66 billion in 3Q17, mainly reflecting capital expenditures of NT\$61.71 billion.

Net cash used in financing activities was NT\$212.79 billion, largely due to the payment of cash dividends and repayment of corporate bonds.

As a result, net cash position decreased NT\$162.39 billion to NT\$408.08 billion at the end of 3Q17.



### Operating and Free Cash Flow:

Free cash flow was NT\$55.07 billion in 3Q17, an increase of NT\$56.86 billion from last quarter.

## V. CapEx

<b>V. Capital Expenditures</b>				
(in US\$ billions)	<b>3Q17</b>	<b>2Q17</b>	<b>1Q17</b>	<b>YTD</b>
<b>Capital Expenditures</b>	<b>2.05</b>	<b>3.47</b>	<b>3.29</b>	<b>8.81</b>

### Capital Expenditures:

Capital expenditures for TSMC on a consolidated basis totaled US\$2.05 billion in 3Q17. The Company now expects its full year capital budget to be US\$10.8 billion.

## VI. Recap of Recent Important Events & Announcements

- TSMC Senior Vice President Dr. Stephen Tso to Retire ( 2017/10/16 )
- TSMC Purchases Another 100 million kWh in Green Power ( 2017/10/16 )
- TSMC Dr. Morris Chang Announces Retirement in June 2018. Future Dual Leadership Will Be Mark Liu as Chairman And C.C. Wei as CEO ( 2017/10/02 )
- TSMC to Build 3nm Fab in Tainan Science Park ( 2017/09/29 )
- TSMC Chairman Dr. Morris Chang Honored by Forbes Magazine as One of the World's 100 Greatest Living Business Minds ( 2017/09/21 )
- Xilinx, Arm, Cadence, and TSMC Announce World's First CCIX Silicon Demonstration Vehicle in 7nm Process Technology ( 2017/09/11 )
- Ambiq Micro and TSMC Deliver World's Lowest Energy Consumption for Huawei's Fitness Wearables ( 2017/09/08 )