

3Q18

Quarterly Management Report
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Topics in This Report:

- Revenue Analysis
- Profit & Expense Analysis
- Financial Condition Review
- Cash Flow
- CapEx
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Operating Results Review:**Summary:***(Amounts are on consolidated basis and are in NT\$ billions unless otherwise noted)*

	<u>3Q18</u>	<u>2Q18</u>	<u>3Q17</u>	<u>QoQ</u>	<u>YoY</u>
EPS (NT\$ per common share)	3.44	2.79	3.47	23.2%	-0.9%
(US\$ per ADR unit)	0.56	0.47	0.57	23.2%	-0.9%
Net Revenue (US\$ billions)	8.49	7.85	8.32	8.1%	1.9%
Net Revenue	260.35	233.28	252.11	11.6%	3.3%
Gross Profit	123.37	111.53	125.88	10.6%	-2.0%
<i>Gross Margin</i>	<i>47.4%</i>	<i>47.8%</i>	<i>49.9%</i>		
Operating Expenses	(28.13)	(26.44)	(27.54)	6.4%	2.1%
Other Operating Income and Expenses	0.01	(0.66)	(0.28)		
Operating Income	95.25	84.43	98.06	12.8%	-2.9%
<i>Operating Margin</i>	<i>36.6%</i>	<i>36.2%</i>	<i>38.9%</i>		
Non-Operating Items	3.65	3.16	2.46		
Net Income Attributable to Shareholders of the Parent Company	89.07	72.29	89.93	23.2%	-0.9%
<i>Net Profit Margin</i>	<i>34.2%</i>	<i>31.0%</i>	<i>35.7%</i>		
Wafer Shipment (kpcs 12 inch-equiv.)	2,712	2,674	2,744	1.4%	-1.2%

*Note: Diluted weighted average outstanding shares were 25,930mn units in 3Q18***Financial Highlights:****Third Quarter 2018**

- Net revenue was NT\$260.35 billion, representing an 11.6% increase from NT\$233.28 billion in 2Q18 and a 3.3% increase from NT\$252.11 billion in 3Q17.
- Gross margin was 47.4%, 0.4 percentage point lower than 2Q18 and 2.5 percentage points lower than 3Q17.
- Operating margin was 36.6%, up 0.4 percentage point from 2Q18 and down 2.3 percentage points from 3Q17.
- Non-operating items were a gain of NT\$3.65 billion, compared to a gain of NT\$3.16 billion in 2Q18 and a gain of NT\$2.46 billion in 3Q17.
- Net income attributable to shareholders of the parent company was NT\$89.07 billion, up 23.2% from 2Q18 and down 0.9% from 3Q17. Net profit margin was 34.2% and diluted EPS was NT\$3.44.

I. Revenue Analysis

Wafer Revenue by Application	3Q18	2Q18	3Q17
Computer	13%	21%	10%
Communication	56%	48%	56%
Consumer	7%	8%	9%
Industrial/Standard	24%	23%	25%

Wafer Revenue by Technology	3Q18	2Q18	3Q17
7nm	11%	0%	0%
10nm	6%	13%	10%
16/20nm	25%	25%	24%
28nm	19%	23%	23%
40/45nm	12%	11%	12%
65nm	8%	9%	10%
90nm	4%	5%	5%
0.11/0.13um	3%	2%	3%
0.15/0.18um	9%	9%	10%
0.25um and above	3%	3%	3%

Net Revenue by Geography	3Q18	2Q18	3Q17
North America	61%	53%	64%
Asia Pacific	10%	10%	10%
China	16%	23%	11%
EMEA	7%	7%	8%
Japan	6%	7%	7%

Revenue Analysis:

In the third quarter, revenue increased 11.6% quarter-over-quarter, primarily attributable to new product launches using 7nm technology and a more favorable foreign exchange rate.

By application, Communication and Industrial/Standard increased 24% and 6% respectively, while Computer and Consumer decreased 35% and 1% respectively.

By technology, 7nm process technology contributed 11% of total wafer revenue in 3Q18. 10nm was 6% of total wafer revenue and the combined 16/20nm contribution accounted for 25%. Advanced technologies (28nm and below) accounted for 61% of total wafer revenue.

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%, 16%, 7%, and 6% of total net revenue respectively.

II. Profit & Expense Analysis

II - 1. Gross Profit Analysis			
(In NT\$ billions)	3Q18	2Q18	3Q17
Cost of Revenue	136.98	121.75	126.23
Gross Profit	123.37	111.53	125.88
Gross Margin	47.4%	47.8%	49.9%

Gross Profit Analysis:

Gross margin was 47.4% in 3Q18, 0.4 percentage point lower than 2Q18, as the unfavorable technology mix was partially offset by improvement in backend profitability, while the more favorable foreign exchange rate was offset by the August 3 Virus Incident impact.

II - 2. Operating Income Analysis

(In NT\$ billions)	<u>3Q18</u>	<u>2Q18</u>	<u>3Q17</u>
Total Operating Expenses	(28.13)	(26.44)	(27.54)
Research & Development	(21.89)	(19.89)	(21.05)
SG&A	(6.24)	(6.55)	(6.49)
Other Operating Income and Expenses	0.01	(0.66)	(0.28)
Operating Income	95.25	84.43	98.06
Operating Margin	36.6%	36.2%	38.9%
Total Operating Expenses as % of Net Revenue	10.8%	11.3%	10.9%

Operating Income Analysis:

Total operating expenses were 10.8% of net revenue in 3Q18, a decline of 0.5 percentage point from 11.3% in 2Q18, despite a higher level of development activities for 7nm+ and 5nm technologies. Operating margin improved 0.4 percentage point from 36.2% in 2Q18 to 36.6% in 3Q18.

II - 3. Non-Operating Items

(In NT\$ billions)	<u>3Q18</u>	<u>2Q18</u>	<u>3Q17</u>
L-T Investments	1.00	0.27	0.75
SSMC	0.39	0.36	0.45
Others	0.61	(0.09)	0.30
Net Interest Income (Expenses)	3.08	2.94	1.28
Other Gains and Losses	(0.43)	(0.05)	0.43
Total Non-Operating Items	3.65	3.16	2.46

Non-Operating Items:

Total non-operating items were a gain of NT\$3.65 billion in 3Q18, compared to a gain of NT\$3.16 billion in 2Q18.

II - 4. Net Profit and EPS

(In NT\$ billions)	<u>3Q18</u>	<u>2Q18</u>	<u>3Q17</u>
Income before Income Tax	98.90	87.59	100.52
Income Tax Expenses	(9.80)	(15.30)	(10.57)
Effective Tax Rate	10.0%	17.5%	10.6%
Net Income Attributable to the Parent Company	89.07	72.29	89.93
Net Profit Margin	34.2%	31.0%	35.7%
EPS (NT\$ per common share)	3.44	2.79	3.47

Net Profit and EPS:

Net income attributable to shareholders of the parent company was NT\$89.07 billion, up 23.2% from 2Q18 and down 0.9% from 3Q17. The quarter-over-quarter change was partially attributable to the lower effective tax rate in 3Q18.

III. Financial Condition Review

III - 1. Liquidity Analysis			
(Balance Sheet Items)			
(In NT\$ billions)	<u>3Q18</u>	<u>2Q18</u>	<u>3Q17</u>
Cash & Marketable Securities	604.02	748.92	501.78
Accounts Receivable	129.54	88.20	118.73
Inventories	105.34	99.03	73.89
Other Current Assets	20.32	22.89	10.46
Total Current Assets	859.22	959.04	704.86
Short-term Loans	73.98	30.84	54.43
Accounts Payable	88.89	70.26	76.96
Current Portion of Bonds Payable and Bank Loans	34.90	15.90	59.07
Dividends Payable	0.00	207.52	0.00
Accrued Liabilities and Others	123.86	138.48	108.06
Total Current Liabilities	321.63	463.00	298.52
Current Ratio (x)	2.7	2.1	2.4
Net Working Capital	537.59	496.04	406.34

Liquidity Analysis:

At the end of 3Q18, cash and marketable securities decreased by NT\$144.90 billion to NT\$604.02 billion, primarily due to the payment of NT\$207.52 billion cash dividends, partially offset by the increase of NT\$43.14 billion in short-term loans for hedging purpose.

Total current liabilities decreased by NT\$141.37 billion, largely attributable to the cash dividend payment during the quarter, partially offset by the increase in short-term loans, increase in the current portion of bonds payable and increase in payables to suppliers.

Net working capital was NT\$537.59 billion and current ratio was 2.7x.

III - 2. Receivable/Inventory Days			
(In Number of Days)	<u>3Q18</u>	<u>2Q18</u>	<u>3Q17</u>
Days of Receivable	38	38	42
Days of Inventory	73	74	53

Receivable and Inventory Days:

Days of receivable remained at 38 days in 3Q18.

Days of inventory decreased 1 day to 73 days due to stronger wafer shipments during the quarter.

III - 3. Debt Service			
(In NT\$ billions)	<u>3Q18</u>	<u>2Q18</u>	<u>3Q17</u>
Cash & Marketable Securities	604.02	748.92	501.78
Interest-Bearing Debts	(165.78)	(130.14)	(205.32)
Net Cash Reserves	438.24	618.78	296.46

Debt Service:

Net cash reserves decreased NT\$180.54 billion to NT\$438.24 billion in 3Q18, mainly due to the decrease in cash and marketable securities and the increase in short-term loans.

IV. Cash Flow

IV - 1. Quarterly Cash Flow Analysis				
(In NT\$ billions)	3Q18	2Q18	3Q17	
Income before Income Tax	98.90	87.59	100.52	
Depreciation & Amortization	73.61	71.41	71.16	
Other Operating Sources/(Uses)	(78.43)	(29.23)	(54.90)	
Total Operating Sources/(Uses)	94.08	129.77	116.78	
Capital Expenditures	(69.95)	(59.68)	(61.71)	
Marketable Financial Instruments	0.82	(3.36)	(7.54)	
Other Investing Sources/(Uses)	5.66	2.97	3.59	
Net Investing Sources/(Uses)	(63.47)	(60.07)	(65.66)	
Increase (Decrease) in Short-term Loans	43.37	(27.97)	0.00	
Cash Dividends	(207.44)	0.00	(181.51)	
Other Financing Sources/(Uses)	(8.37)	(1.38)	(31.28)	
Net Financing Sources/(Uses)	(172.44)	(29.35)	(212.79)	
Exchange Rate Changes	(1.67)	14.10	(0.72)	
Net Cash Position Changes	(143.50)	54.45	(162.39)	
Ending Cash Balance	488.73	632.23	408.08	

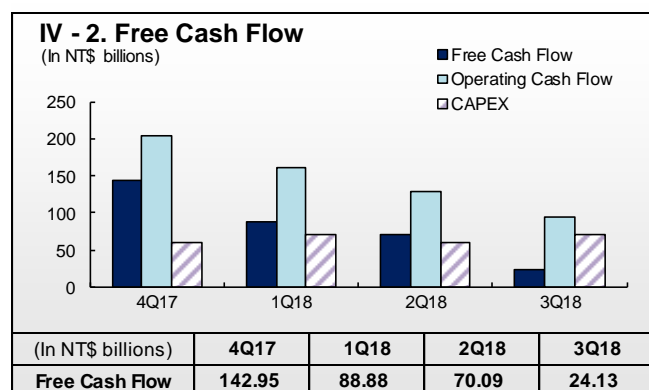
Summary of Cash Flow:

During the third quarter, cash generated from operating activities totaled NT\$94.08 billion, including (1) NT\$98.90 billion from income before income tax, (2) NT\$73.61 billion from depreciation & amortization expenses, and (3) NT\$78.43 billion for other operating uses, which included an increase in accounts receivable of NT\$41.34 billion and the payment of 2017 employee profit sharing of NT\$22.37 billion.

Net cash used in investing activities was NT\$63.47 billion in 3Q18, primarily including capital expenditures of NT\$69.95 billion.

Net cash used in financing activities was NT\$172.44 billion, largely due to the payment of cash dividends, partially offset by the increase in short term loans.

As a result, net cash position decreased NT\$143.50 billion to NT\$488.73 billion at the end of 3Q18.



Operating and Free Cash Flow:

Free cash flow was NT\$24.13 billion in 3Q18, a decrease of NT\$45.96 billion from last quarter, due to lower operating cash flow and higher capital expenditures.

V. CapEx

V. Capital Expenditures				
(in US\$ billions)	3Q18	2Q18	1Q18	YTD
Capital Expenditures	2.28	2.01	2.45	6.74

Capital Expenditures:

Capital expenditures for TSMC on a consolidated basis totaled US\$2.28 billion in 3Q18.

VI. Recap of Recent Important Events & Announcements

- TSMC Announces 5th Open Innovation Platform® Alliance, the OIP Cloud Alliance (2018/10/03)
- TSMC Announces OIP Ecosystem Enabled in the Cloud (2018/10/03)
- TSMC Details Impact of Computer Virus Incident (2018/08/05)