

3Q20

Quarterly Management Report
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Operating Results Review:

CONTACT

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Topics in This Report:

- Revenue Analysis
- Profit & Expense Analysis
- Financial Condition Review
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- CapEx
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Summary:

(Amounts are on consolidated basis and are in NT\$ billions unless otherwise noted)

	3Q20	2Q20	3Q19	QoQ	YoY
EPS (NT\$ per common share)	5.30	4.66	3.90	13.6%	35.9%
(US\$ per ADR unit)	0.90	0.78	0.62	13.6%	35.9%
Net Revenue (US\$ billions)	12.14	10.38	9.40	16.9%	29.2%
Net Revenue	356.43	310.70	293.05	14.7%	21.6%
Gross Profit	190.49	164.62	139.41	15.7%	36.6%
Gross Margin	53.4%	53.0%	47.6%		
Operating Expenses	(40.89)	(33.52)	(31.38)	22.0%	30.3%
Other Operating Income and Expenses	0.45	(0.01)	(0.14)		
Operating Income	150.05	131.09	107.89	14.5%	39.1%
Operating Margin	42.1%	42.2%	36.8%		
Non-Operating Items	5.07	5.31	4.45		
Net Income Attributable to Shareholders of the Parent Company	137.31	120.82	101.07	13.6%	35.9%
Net Profit Margin	38.5%	38.9%	34.5%		
Wafer Shipment (kpcs 12 inch-equiv.)	3,240	2,985	2,733	8.5%	18.6%

Note: Diluted weighted average outstanding shares were 25,930mn units in 3Q20

Financial Highlights:**Third Quarter 2020**

- Net revenue was NT\$356.43 billion, representing a 14.7% increase from NT\$310.70 billion in 2Q20 and a 21.6% increase from NT\$293.05 billion in 3Q19.
- Gross margin was 53.4%, 0.4 percentage point higher than 2Q20 and 5.8 percentage points higher than 3Q19.
- Operating margin was 42.1%, down 0.1 percentage point from 2Q20 and up 5.3 percentage points from 3Q19.
- Non-operating items were a gain of NT\$5.07 billion, compared to a gain of NT\$5.31 billion in 2Q20 and a gain of NT\$4.45 billion in 3Q19.
- Net income attributable to shareholders of the parent company was NT\$137.31 billion, up 13.6% from 2Q20 and up 35.9% from 3Q19. Net profit margin was 38.5% and diluted EPS was NT\$5.30.

I. Revenue Analysis

Wafer Revenue by Technology	3Q20	2Q20	3Q19
5nm	8%	0%	0%
7nm	35%	36%	27%
10nm	0%	0%	2%
16nm	18%	18%	22%
20nm	1%	1%	1%
28nm	12%	14%	16%
40/45nm	8%	9%	10%
65nm	5%	6%	7%
90nm	2%	3%	2%
0.11/0.13um	2%	3%	2%
0.15/0.18um	7%	8%	9%
0.25um and above	2%	2%	2%

Net Revenue by Platform	3Q20	2Q20	3Q19
Smartphone	46%	47%	49%
High Performance Computing	37%	33%	29%
Internet of Things	9%	8%	9%
Automotive	2%	4%	4%
Digital Consumer Electronics	3%	5%	5%
Others	3%	3%	4%

Net Revenue by Geography	3Q20	2Q20	3Q19
North America	59%	58%	60%
China	22%	21%	20%
Asia Pacific	10%	10%	9%
EMEA	5%	6%	6%
Japan	4%	5%	5%

Revenue Analysis:

In the third quarter, revenue increased 14.7% quarter-over-quarter, driven by the strong demand of our advanced technologies and specialty technology solutions, for 5G smartphones, HPC and IoT-related applications.

By technology, 5nm process technology contributed 8% of total wafer revenue in 3Q20 while 7nm and 16nm accounted for 35% and 18% respectively. Advanced technologies (16nm and below) accounted for 61% of total wafer revenue.

By platform, Smartphone represented 46% and HPC 37% of net revenue, while IoT, Automotive, DCE, and Others each represented 9%, 2%, 3%, and 3%.

Sequentially, revenue from Smartphone, HPC, IoT and Others increased 12%, 25%, 24%, and 19% respectively from 2Q20, while Automotive and DCE decreased 23% and 24% respectively.

From a geographic perspective, revenue from customers based in North America accounted for 59% of total net revenue, while revenue from China, Asia Pacific, EMEA (Europe, Middle East, and Africa) and Japan accounted for 22%, 10%, 5%, and 4% of total net revenue respectively.

II. Profit & Expense Analysis

II - 1. Gross Profit Analysis			
(In NT\$ billions)	3Q20	2Q20	3Q19
Net Revenue	356.43	310.70	293.05
Cost of Revenue	(165.94)	(146.08)	(153.64)
Gross Profit	190.49	164.62	139.41
Gross Margin	53.4%	53.0%	47.6%

Gross Profit Analysis:

Gross margin was 53.4% in 3Q20, 0.4 percentage point higher than 2Q20, mainly due to higher level of utilization, partially offset by margin dilution from 5nm ramp and an unfavorable exchange rate.

II - 2. Operating Income Analysis

(In NT\$ billions)	<u>3Q20</u>	<u>2Q20</u>	<u>3Q19</u>
Total Operating Expenses	(40.89)	(33.52)	(31.38)
Research & Development	(29.68)	(24.89)	(23.97)
SG&A	(11.21)	(8.63)	(7.41)
Other Operating Income and Expenses	0.45	(0.01)	(0.14)
Operating Income	150.05	131.09	107.89
Operating Margin	42.1%	42.2%	36.8%
Total Operating Expenses as % of Net Revenue	11.4%	10.8%	10.7%

Operating Income Analysis:

Total operating expenses increased NT\$7.37 billion to NT\$40.89 billion in 3Q20, mainly attributable to a higher level of development activities for N4 and N3 technologies and expenses to facilitate the expansion in Hsinchu.

II - 3. Non-Operating Items

(In NT\$ billions)	<u>3Q20</u>	<u>2Q20</u>	<u>3Q19</u>
L-T Investments	0.83	0.68	0.92
SSMC	0.12	0.18	0.31
Others	0.71	0.50	0.61
Net Interest Income (Expenses)	1.52	2.07	3.07
Other Gains and Losses	2.72	2.56	0.46
Total Non-Operating Items	5.07	5.31	4.45

Non-Operating Items:

Total non-operating items were a gain of NT\$5.07 billion in 3Q20, compared to a gain of NT\$5.31 billion in 2Q20. The decrease was mainly due to lower interest income.

II - 4. Net Profit and EPS

(In NT\$ billions)	<u>3Q20</u>	<u>2Q20</u>	<u>3Q19</u>
Income before Tax	155.12	136.40	112.34
Income Tax Expenses	(17.74)	(15.51)	(11.24)
Effective Tax Rate	11.5%	11.4%	10.1%
Net Income Attributable to the Parent Company	137.31	120.82	101.07
Net Profit Margin	38.5%	38.9%	34.5%
EPS (NT\$ per common share)	5.30	4.66	3.90

Net Profit and EPS:

Net income attributable to shareholders of the parent company was NT\$137.31 billion in 3Q20, up 13.6% from 2Q20 and up 35.9% from 3Q19.

III. Financial Condition Review

III - 1. Liquidity Analysis			
(Balance Sheet Items)			
(In NT\$ billions)	<u>3Q20</u>	<u>2Q20</u>	<u>3Q19</u>
Cash & Marketable Securities	742.42	605.02	584.92
Accounts Receivable	162.58	149.60	145.42
Inventories	109.51	85.79	96.69
Other Current Assets	15.16	19.62	22.40
Total Current Assets	1,029.67	860.03	849.43
Short-term Loans	155.38	169.55	85.57
Accounts Payable	141.53	137.27	130.40
Current Portion of Bonds Payable	2.60	12.80	31.80
Dividends Payable	129.65	129.65	116.69
Accrued Liabilities and Others	159.08	165.53	130.32
Total Current Liabilities	588.24	614.80	494.78
Current Ratio (x)	1.8	1.4	1.7
Net Working Capital	441.43	245.23	354.65

Liquidity Analysis:

Cash and marketable securities increased by NT\$137.40 billion from 2Q20 to NT\$742.42 billion in 3Q20.

Total current liabilities decreased by NT\$26.56 billion, mainly as a result of the decrease of NT\$14.17 billion in short-term loans and the decrease of NT\$10.20 billion in current portion of bonds payable.

Net working capital was NT\$441.43 billion and current ratio was 1.8x in 3Q20.

III - 2. Receivable/Inventory Days			
(In Number of Days)	<u>3Q20</u>	<u>2Q20</u>	<u>3Q19</u>
Days of Receivable	40	44	41
Days of Inventory	58	55	65

Receivable and Inventory Days:

Days of receivable decreased 4 days to 40 days in 3Q20.

Days of inventory increased 3 days to 58 days, primarily due to N5 ramp.

III - 3. Debt Service			
(In NT\$ billions)	<u>3Q20</u>	<u>2Q20</u>	<u>3Q19</u>
Cash & Marketable Securities	742.42	605.02	584.92
Interest-Bearing Debts	(386.01)	(271.28)	(142.47)
Net Cash Reserves	356.41	333.74	442.45

Debt Service:

Net cash reserves increased NT\$22.67 billion to NT\$356.41 billion in 3Q20.

Interest-bearing debts increased NT\$114.73 billion, mainly due to the issuance of NT\$144.61 billion in corporate bonds, partially offset by the decrease in short-term loans of NT\$14.17 billion and repayment of bonds of NT\$10.20 billion.

IV. Cash Flow

IV - 1. Quarterly Cash Flow Analysis			
(In NT\$ billions)	3Q20	2Q20	3Q19
Income before Tax	155.12	136.40	112.34
Depreciation & Amortization	94.73	70.88	66.76
Other Operating Sources/(Uses)	(59.67)	(36.94)	(37.35)
Net Operating Sources/(Uses)	190.18	170.34	141.75
Capital Expenditures	(99.31)	(126.70)	(98.12)
Marketable Financial Instruments	0.33	0.84	(14.01)
Other Investing Sources/(Uses)	2.90	(3.89)	3.84
Net Investing Sources/(Uses)	(96.08)	(129.75)	(108.29)
Short-term Loans	(16.80)	32.23	7.33
Cash Dividends	(64.83)	(64.83)	(207.44)
Bonds Payable	136.03	36.00	(26.50)
Other Financing Sources/(Uses)	(6.96)	2.51	(2.50)
Net Financing Sources/(Uses)	47.44	5.91	(229.11)
Exchange Rate Changes	(4.95)	(9.67)	(1.62)
Cash Position Net Changes	136.59	36.83	(197.27)
Ending Cash Balance	604.20	467.61	452.43

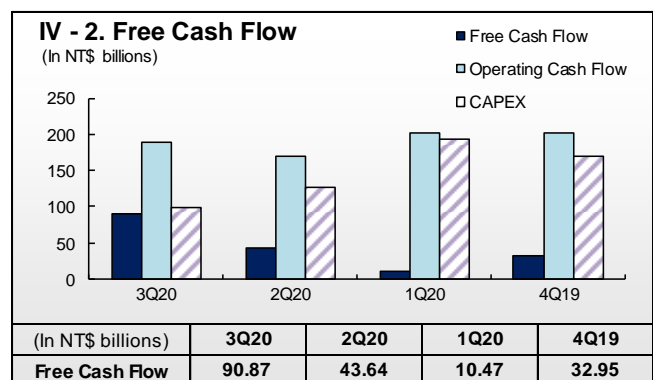
Summary of Cash Flow:

During the third quarter, cash generated from operating activities totaled NT\$190.18 billion, including (1) NT\$155.12 billion from income before tax, (2) NT\$94.73 billion from depreciation & amortization expenses, and (3) NT\$59.67 billion for other operating uses. The other operating uses were mainly attributable to the increase of NT\$23.72 billion in inventories, income taxes paid of NT\$18.35 billion, and the increase of NT\$12.98 billion in accounts receivables.

Net cash used in investing activities was NT\$96.08 billion in 3Q20, primarily attributable to capital expenditures of NT\$99.31 billion.

Net cash generated from financing activities was NT\$47.44 billion, mainly reflecting the net changes in bonds payable of NT\$136.03 billion and the payment of 4Q19 cash dividends.

As a result, cash position increased NT\$136.59 billion to NT\$604.20 billion at the end of 3Q20.



Operating and Free Cash Flow:

Free cash flow increased NT\$47.23 billion to NT\$90.87 billion in 3Q20, mainly due to higher operating cash flow and lower capital expenditures during the quarter.

V. CapEx

V. Capital Expenditures				
(in US\$ billions)	3Q20	2Q20	1Q20	YTD
Capital Expenditures	3.42	4.24	6.39	14.05

Capital Expenditures:

Capital expenditures for TSMC on a consolidated basis totaled US\$3.42 billion in 3Q20.

VI. Recap of Recent Important Events & Announcements

- TSMC Showcased Leading Technologies at Online Technology Symposium and OIP Ecosystem Forum (2020/08/25)
- TSMC Board of Directors Approved the Issuance of US Dollar-Denominated Senior Unsecured Corporate Bonds for an Amount Not to Exceed US\$1 Billion and the Issuance of US Dollar-Denominated Senior Unsecured Corporate Bonds for an Amount Not to Exceed US\$3 Billion to Finance TSMC's Capacity Expansion (2020/08/11)
- TSMC Board of Directors Approved NT\$2.5 Cash Dividend for Second Quarter of 2020 and Set December 17 as Ex-Dividend Date, December 23 as the Record Date and January 14, 2021 as the Distribution Date (2020/08/11)