



3Q23

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
- Cash Flow
- CapEx
- Recap of Recent Important Events & Announcements

Summary:

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

| | <u>3Q23</u> | <u>2Q23</u> | <u>3Q22</u> | <u>QoQ</u> | <u>YoY</u> |
|---|--------------|--------------|--------------|------------|------------|
| EPS (NT\$ per common share) | 8.14 | 7.01 | 10.83 | 16.1% | -24.9% |
| (US\$ per ADR unit) | 1.29 | 1.14 | 1.79 | | |
| Net Revenue (US\$ billions) | 17.28 | 15.68 | 20.23 | 10.2% | -14.6% |
| Net Revenue | 546.73 | 480.84 | 613.14 | 13.7% | -10.8% |
| Gross Profit | 296.64 | 260.20 | 370.50 | 14.0% | -19.9% |
| <i>Gross Margin</i> | <i>54.3%</i> | <i>54.1%</i> | <i>60.4%</i> | | |
| Operating Expenses | (68.70) | (58.19) | (60.19) | 18.1% | 14.2% |
| Other Operating Income and Expenses | 0.13 | (0.05) | 0.01 | | |
| Operating Income | 228.07 | 201.96 | 310.32 | 12.9% | -26.5% |
| <i>Operating Margin</i> | <i>41.7%</i> | <i>42.0%</i> | <i>50.6%</i> | | |
| Non-Operating Items | 13.87 | 12.72 | 6.37 | | |
| Net Income Attributable to Shareholders of the Parent Company | 211.00 | 181.80 | 280.87 | 16.1% | -24.9% |
| <i>Net Profit Margin</i> | <i>38.6%</i> | <i>37.8%</i> | <i>45.8%</i> | | |
| Wafer Shipment (kpcs 12 inch-equiv.) | 2,902 | 2,916 | 3,974 | -0.5% | -27.0% |
| Average Exchange Rate--USD/NTD | 31.64 | 30.67 | 30.32 | 3.2% | 4.4% |

Note: Diluted weighted average outstanding shares were 25,929mn units in 3Q23

Financial Highlights:**Third Quarter 2023**

- Net revenue was NT\$546.73 billion, representing a 13.7% increase from NT\$480.84 billion in 2Q23 and a 10.8% decrease from NT\$613.14 billion in 3Q22.
- Gross margin was 54.3%, 0.2 percentage point higher than 2Q23 and 6.1 percentage points lower than 3Q22.
- Operating margin was 41.7%, down 0.3 percentage point from 2Q23 and down 8.9 percentage points from 3Q22.
- Non-operating items were a gain of NT\$13.87 billion, compared to a gain of NT\$12.72 billion in 2Q23 and a gain of NT\$6.37 billion in 3Q22.
- Net income attributable to shareholders of the parent company was NT\$211.00 billion, up 16.1% from 2Q23 and down 24.9% from 3Q22. Net profit margin was 38.6% and diluted EPS was NT\$8.14.

I. Revenue Analysis

| Wafer Revenue by Technology | 3Q23 | 2Q23 | 3Q22 |
|-----------------------------|------|------|------|
| 3nm | 6% | 0% | 0% |
| 5nm | 37% | 30% | 28% |
| 7nm | 16% | 23% | 26% |
| 16nm | 9% | 11% | 12% |
| 20nm | 1% | 1% | 0% |
| 28nm | 10% | 11% | 10% |
| 40/45nm | 6% | 7% | 7% |
| 65nm | 6% | 7% | 5% |
| 90nm | 1% | 2% | 2% |
| 0.11/0.13um | 3% | 2% | 3% |
| 0.15/0.18um | 4% | 5% | 6% |
| 0.25um and above | 1% | 1% | 1% |

| Net Revenue by Platform | 3Q23 | 2Q23 | 3Q22 |
|------------------------------|------|------|------|
| High Performance Computing | 42% | 44% | 39% |
| Smartphone | 39% | 33% | 41% |
| Internet of Things | 9% | 8% | 10% |
| Automotive | 5% | 8% | 5% |
| Digital Consumer Electronics | 2% | 3% | 2% |
| Others | 3% | 4% | 3% |

| Net Revenue by Geography | 3Q23 | 2Q23 | 3Q22 |
|--------------------------|------|------|------|
| North America | 69% | 66% | 72% |
| China | 12% | 12% | 8% |
| Asia Pacific | 8% | 8% | 10% |
| EMEA | 5% | 7% | 5% |
| Japan | 6% | 7% | 5% |

Revenue Analysis:

In the third quarter, revenue increased 13.7% quarter-over-quarter, as our business was supported by the strong ramp of our industry-leading 3-nanometer technology and higher demand for 5-nanometer technologies, partially offset by customers' ongoing inventory adjustment.

By technology, 3nm process technology contributed 6% of total wafer revenue in 3Q23, while 5nm and 7nm accounted for 37% and 16% respectively. Advanced technologies (7nm and below) accounted for 59% of total wafer revenue.

By platform, HPC and Smartphone represented 42% and 39% of net revenue respectively, while IoT, Automotive, DCE, and Others each represented 9%, 5%, 2%, and 3%.

Sequentially, revenue from HPC, Smartphone, and IoT increased 6%, 33%, and 24% respectively from 2Q23, while Automotive, DCE, and others decreased 24%, 1%, and 2% respectively.

From a geographic perspective, revenue from customers based in North America accounted for 69% of total net revenue, while revenue from China, Asia Pacific, EMEA (Europe, Middle East, and Africa) and Japan accounted for 12%, 8%, 5%, and 6% of total net revenue respectively.

II. Profit & Expense Analysis

II - 1. Gross Profit Analysis

| (In NT\$ billions) | 3Q23 | 2Q23 | 3Q22 |
|---------------------|---------------|---------------|---------------|
| Net Revenue | 546.73 | 480.84 | 613.14 |
| Cost of Revenue | (250.09) | (220.64) | (242.64) |
| Gross Profit | 296.64 | 260.20 | 370.50 |
| Gross Margin | 54.3% | 54.1% | 60.4% |

Gross Profit Analysis:

Gross margin was 54.3% in 3Q23, 0.2 percentage point higher than 2Q23, mainly reflecting higher capacity utilization and a more favorable foreign exchange rate, partially offset by margin dilution from N3 ramp.

II - 2. Operating Income Analysis

| (In NT\$ billions) | <u>3Q23</u> | <u>2Q23</u> | <u>3Q22</u> |
|---|----------------|----------------|----------------|
| Total Operating Expenses | (68.70) | (58.19) | (60.19) |
| Research & Development | (51.13) | (41.66) | (42.98) |
| SG&A | (17.57) | (16.53) | (17.21) |
| Other Operating Income and Expenses | 0.13 | (0.05) | 0.01 |
| Operating Income | 228.07 | 201.96 | 310.32 |
| Operating Margin | 41.7% | 42.0% | 50.6% |
| Total Operating Expenses as % of Net Revenue | 12.6% | 12.1% | 9.8% |

Operating Income Analysis:

Total operating expenses increased NT\$10.51 billion to NT\$68.70 billion in 3Q23, accounting for 12.6% of net revenue, as compared to 12.1% in 2Q23. Operating margin declined 0.3 percentage point sequentially to 41.7% in 3Q23, mainly attributable to higher R&D expenses for 3nm and 2nm development.

II - 3. Non-Operating Items

| (In NT\$ billions) | <u>3Q23</u> | <u>2Q23</u> | <u>3Q22</u> |
|---------------------------------------|--------------|--------------|-------------|
| L-T Investments | 1.17 | 1.13 | 2.08 |
| Net Interest Income (Expenses) | 12.48 | 10.67 | 3.25 |
| Other Gains and Losses | 0.22 | 0.92 | 1.04 |
| Total Non-Operating Items | 13.87 | 12.72 | 6.37 |

Non-Operating Items:

Total non-operating items were a gain of NT\$13.87 billion in 3Q23, compared to a gain of NT\$12.72 billion in 2Q23.

II - 4. Net Profit and EPS

| (In NT\$ billions) | <u>3Q23</u> | <u>2Q23</u> | <u>3Q22</u> |
|--|----------------|----------------|----------------|
| Income before Tax | 241.94 | 214.68 | 316.69 |
| Income Tax Expenses | (31.14) | (32.96) | (35.72) |
| Effective Tax Rate | 12.9% | 15.4% | 11.4% |
| Net Income Attributable to the Parent Company | 211.00 | 181.80 | 280.87 |
| Net Profit Margin | 38.6% | 37.8% | 45.8% |
| EPS (NT\$ per common share) | 8.14 | 7.01 | 10.83 |

Net Profit and EPS:

Net income attributable to shareholders of the parent company was NT\$211.00 billion in 3Q23, up 16.1% from 2Q23 and down 24.9% from 3Q22.

III. Financial Condition Review

| III - 1. Liquidity Analysis | | | |
|---|-----------------|-----------------|-----------------|
| (Balance Sheet Items) | | | |
| (In NT\$ billions) | <u>3Q23</u> | <u>2Q23</u> | <u>3Q22</u> |
| Cash & Marketable Securities | 1,551.32 | 1,489.96 | 1,498.87 |
| Accounts Receivable | 222.83 | 191.03 | 261.54 |
| Inventories | 262.09 | 234.33 | 218.34 |
| Other Current Assets | 46.24 | 44.65 | 35.48 |
| Total Current Assets | 2,082.48 | 1,959.97 | 2,014.23 |
| Accounts Payable | 284.62 | 189.73 | 221.80 |
| Current Portion of Bonds Payable and Bank Loans | 7.42 | 8.12 | 23.43 |
| Dividends Payable | 155.60 | 149.31 | 142.62 |
| Accrued Liabilities and Others | 522.40 | 463.67 | 419.58 |
| Total Current Liabilities | 970.04 | 810.83 | 807.43 |
| Current Ratio (x) | 2.1 | 2.4 | 2.5 |
| Net Working Capital | 1,112.44 | 1,149.14 | 1,206.80 |

Liquidity Analysis:

Total current assets increased by NT\$122.51 billion, mainly due to the increase of NT\$61.36 billion in cash & marketable securities, the increase of NT\$31.80 billion in accounts receivable, and the increase of NT\$27.76 billion in inventories.

Total current liabilities increased by NT\$159.21 billion, mainly due to the increase of NT\$94.89 billion in accounts payable and the increase of NT\$58.73 billion in accrued liabilities and others.

Net working capital was NT\$1,112.44 billion and current ratio was 2.1x in 3Q23.

| III - 2. Receivable/Inventory Days | | | |
|---|-------------|-------------|-------------|
| (In Number of Days) | <u>3Q23</u> | <u>2Q23</u> | <u>3Q22</u> |
| Days of Receivable | 35 | 32 | 36 |
| Days of Inventory | 96 | 99 | 90 |

Receivable and Inventory Days:

Days of receivable increased 3 days to 35 days in 3Q23.

Days of inventory decreased 3 days to 96 days, primarily due to the increase in wafer shipments.

| III - 3. Debt Service | | | |
|------------------------------|---------------|---------------|---------------|
| (In NT\$ billions) | <u>3Q23</u> | <u>2Q23</u> | <u>3Q22</u> |
| Cash & Marketable Securities | 1,551.32 | 1,489.96 | 1,498.87 |
| Interest-Bearing Debts | (971.79) | (922.68) | (868.87) |
| Net Cash Reserves | 579.53 | 567.28 | 630.00 |

Debt Service:

Net cash reserves increased NT\$12.25 billion to NT\$579.53 billion in 3Q23.

Interest-bearing debts increased NT\$49.11 billion in 3Q23, mainly due to the increase of NT\$29.92 billion in corporate bonds and the increase in bank loans of NT\$19.64 billion under hedging financial liabilities.

IV. Cash Flow

| IV - 1. Quarterly Cash Flow Analysis | | | |
|--------------------------------------|-----------------|-----------------|-----------------|
| (In NT\$ billions) | <u>3Q23</u> | <u>2Q23</u> | <u>3Q22</u> |
| Income before Tax | 241.94 | 214.68 | 316.69 |
| Depreciation & Amortization | 147.28 | 123.94 | 105.34 |
| Other Operating Sources/(Uses) | (94.57) | (171.37) | (9.33) |
| Net Operating Sources/(Uses) | 294.65 | 167.25 | 412.70 |
| Capital Expenditures | (226.62) | (250.53) | (265.97) |
| Marketable Financial Instruments | (39.66) | (29.33) | (24.61) |
| Other Investing Sources/(Uses) | 24.04 | 20.53 | 6.18 |
| Net Investing Sources/(Uses) | (242.24) | (259.33) | (284.40) |
| Short-term Loans | 0.00 | 0.00 | (116.01) |
| Cash Dividends | (71.30) | (71.30) | (71.30) |
| Bonds Payable | 9.80 | 40.70 | 59.65 |
| Other Financing Sources/(Uses) | 23.05 | 4.01 | (2.74) |
| Net Financing Sources/(Uses) | (38.45) | (26.59) | (130.40) |
| Exchange Rate Changes | 21.13 | 10.16 | 44.92 |
| Cash Position Net Changes | 35.09 | (108.51) | 42.82 |
| Ending Cash Balance | 1,311.81 | 1,276.72 | 1,296.01 |

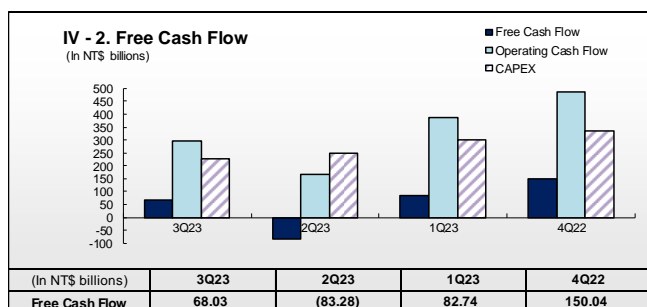
Summary of Cash Flow:

During the third quarter, cash generated from operating activities totaled NT\$294.65 billion, including (1) NT\$241.94 billion from income before tax, (2) NT\$147.28 billion from depreciation & amortization expenses, and (3) NT\$94.57 billion for other operating uses. The decrease of other operating uses compared to 2Q23 were mainly attributable to less income tax payment and changes in working capital.

Net cash used in investing activities was NT\$242.24 billion in 3Q23, primarily attributable to capital expenditures of NT\$226.62 billion.

Net cash used in financing activities was NT\$38.45 billion, mainly reflecting the payment of 4Q22 cash dividends of NT\$71.30 billion, partially offset by the net increase in bonds payable of NT\$9.80 billion and the bank loans of NT\$20.24 billion under hedging financial liabilities.

As a result, cash position increased NT\$35.09 billion to NT\$1,311.81 billion at the end of 3Q23.



Operating and Free Cash Flow:

Free cash flow increased NT\$151.31 billion to an inflow of NT\$68.03 billion in 3Q23, mainly due to the increase of NT\$127.40 billion in operating cash flow during the quarter.

V. CapEx

| V. Capital Expenditures | | | | |
|-----------------------------|-------------|-------------|-------------|--------------|
| (in US\$ billions) | <u>3Q23</u> | <u>2Q23</u> | <u>1Q23</u> | <u>YTD</u> |
| Capital Expenditures | 7.10 | 8.17 | 9.94 | 25.21 |

Capital Expenditures:

Capital expenditures for TSMC on a consolidated basis totaled US\$7.10 billion in 3Q23.

VI. Recap of Recent Important Events & Announcements

- TSMC Announces Breakthrough Set to Redefine the Future of 3D IC. New 3Dblox 2.0 and 3DFabric Alliance Achievements Were Detailed at 2023 OIP Ecosystem Forum (2023/09/28)
- TSMC Accelerates Renewable Energy Adoption and Moves RE100 Target Forward to 2040 (2023/09/15)
- TSMC Board of Directors Approved the Purchase of 10% Equity Interest in IMS Nanofabrication Global, LLC from Intel Corporation for an Amount Not Exceeding US\$432.8 Million (2023/09/12)
- TSMC Board of Directors Approved an Investment in Arm Holdings plc in an Amount Not Exceeding US\$100 Million Based on Arm's Share Price at IPO (2023/09/12)
- MediaTek Successfully Develops First Chip Using TSMC's 3nm Process, Set for Volume Production in 2024 (2023/09/07)
- TSMC, Bosch, Infineon, and NXP Establish Joint Venture European Semiconductor Manufacturing Company (ESMC) to Bring Advanced Semiconductor Manufacturing to Europe (2023/08/08)
- TSMC Board of Directors Approved NT\$3.00 Cash Dividend for the Second Quarter of 2023 and Set December 14 as the Ex-Dividend Date, December 20 as the Record Date and January 11, 2024 as the Distribution Date (2023/08/08)
- TSMC Inaugurates Global R&D Center, Celebrating Its Newest Hub for Technology Innovation (2023/07/28)