

4Q15

Quarterly Management Report  
January 14, 2016**CONTACT**

Elizabeth Sun

Corporate Communication Division

TSMC

invest@tsmc.com

886-3-568-2085

## Topics in This Report

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

**Operating Results Review:****Summary:**

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

|   | <b>4Q15</b> | <b>3Q15</b> | <b>4Q14</b> | <b>2015</b> | <b>2014</b> |
|---|-------------|-------------|-------------|-------------|-------------|
| EPS (NT\$ per common share)                                   | 2.81        | 2.91        | 3.08        | 11.82       | 10.18       |
| (US\$ per ADR unit)   | 0.43        | 0.46        | 0.50        | 1.86        | 1.68        |
| Net Revenue   | 203.52      | 212.51      | 222.52      | 843.50      | 762.81      |
| Gross Profit  | 98.93       | 102.34      | 110.56      | 410.40      | 377.72*     |
| Gross Margin  | 48.6%       | 48.2%       | 49.7%       | 48.7%       | 49.5%       |
| Operating Expenses  | (21.22)     | (22.16)     | (21.57)     | (88.47)     | (80.85)*    |
| Other Operating Income and Expenses                           | 0.25        | (1.79)      | (0.77)      | (1.88)      | (1.00)      |
| Operating Income  | 77.96       | 78.39       | 88.22       | 320.05      | 295.87*     |
| Operating Margin  | 38.3%       | 36.9%       | 39.6%       | 37.9%       | 38.8%       |
| Non-Operating Items   | 2.68        | 5.01        | 1.10        | 30.38       | 6.21        |
| Net Income Attributable to Shareholders of the Parent Company | 72.84       | 75.33       | 79.99       | 306.57      | 263.88*     |
| Net Profit Margin   | 35.8%       | 35.4%       | 35.9%       | 36.3%       | 34.6%       |
| Wafer Shipment (kpcs 12 inch-equiv.)                          | 2,020       | 2,216       | 2,225       | 8,763       | 8,263       |

\* Starting in 2015, TSMC prepares financial statements in accordance with 2013 IFRSs version endorsed by Taiwan. Under IFRS, the impact of newly effected GAAP shall be retroactively applied. We have adjusted Gross Profit, Operating Expenses, Operating Income and Net Income Attributable to Shareholders of the Parent Company by -NT\$12 million, -NT\$7 million, -NT\$20 million, and -NT\$17 million for 2014, respectively.

**Financial Highlights:****Fourth Quarter 2015**

- Net revenue was NT\$203.52 billion, representing a 4.2% decrease from NT\$212.51 billion in 3Q15 and an 8.5% decrease from NT\$222.52 billion in 4Q14.
- Gross margin was 48.6%, 0.4 percentage point higher than 3Q15 and 1.1 percentage points lower than 4Q14.
- Operating margin was 38.3%, up 1.4 percentage points from 3Q15 and down 1.3 percentage points from 4Q14.
- Non-operating items were a gain of NT\$2.68 billion, compared to a gain of NT\$5.01 billion in 3Q15 and a gain of NT\$1.10 billion in 4Q14.
- Net income attributable to shareholders of the parent company was NT\$72.84 billion, down 3.3% from 3Q15 and down 8.9% from 4Q14. Net profit margin was 35.8% and diluted EPS was NT\$2.81.

**Full Year 2015**

- Net revenue was NT\$843.50 billion, representing a 10.6% increase from 2014. In US dollar terms, net revenue increased 5.7% to US\$26.61 billion in 2015.
- Gross margin was 48.7%, down 0.8 percentage point from 49.5% in 2014. Operating margin was 37.9%, down 0.9 percentage point from 38.8% in 2014.
- Diluted EPS was NT\$11.82, up 16.2% from NT\$10.18 in 2014. Net profit margin was 36.3%, up 1.7 percentage points from 34.6% in 2014.

## I. Revenue Analysis

| Wafer Revenue by Application | 4Q15 | 3Q15 | 4Q14 |
|------------------------------|------|------|------|
| Computer                     | 9%   | 8%   | 9%   |
| Communication                | 62%  | 59%  | 65%  |
| Consumer                     | 6%   | 8%   | 7%   |
| Industrial/Standard          | 23%  | 25%  | 19%  |

| Wafer Revenue by Technology | 4Q15 | 3Q15 | 4Q14 |
|-----------------------------|------|------|------|
| 16/20nm                     | 24%  | 21%  | 21%  |
| 28nm                        | 25%  | 27%  | 30%  |
| 40/45nm                     | 14%  | 14%  | 13%  |
| 65nm                        | 11%  | 11%  | 11%  |
| 90nm                        | 7%   | 8%   | 6%   |
| 0.11/0.13um                 | 3%   | 2%   | 2%   |
| 0.15/0.18um                 | 11%  | 12%  | 12%  |
| 0.25um and above            | 5%   | 5%   | 5%   |

| Net Revenue by Geography | 4Q15 | 3Q15 | 4Q14 |
|--------------------------|------|------|------|
| North America            | 69%  | 69%  | 74%  |
| Asia Pacific             | 10%  | 12%  | 9%   |
| China                    | 9%   | 6%   | 6%   |
| EMEA                     | 6%   | 7%   | 6%   |
| Japan                    | 6%   | 6%   | 5%   |

| Wafer Revenue by Technology | 2015 | 2014 |
|-----------------------------|------|------|
| 16/20nm                     | 20%  | 9%   |
| 28nm                        | 28%  | 33%  |
| 40/45nm                     | 14%  | 17%  |
| 65nm                        | 12%  | 13%  |
| 90nm                        | 7%   | 7%   |
| 0.11/0.13um                 | 2%   | 3%   |
| 0.15/0.18um                 | 12%  | 13%  |
| 0.25um and above            | 5%   | 5%   |

| Net Revenue by Geography | 2015 | 2014 |
|--------------------------|------|------|
| North America            | 68%  | 69%  |
| Asia Pacific             | 12%  | 13%  |
| China                    | 8%   | 7%   |
| EMEA                     | 7%   | 6%   |
| Japan                    | 5%   | 5%   |

## II. Profit & Expense Analysis

### II - 1. Gross Profit Analysis

| (In NT\$ billions) | 4Q15   | 3Q15   | 4Q14   | 2015   | 2014    |
|--------------------|--------|--------|--------|--------|---------|
| Cost of Revenue    | 104.59 | 110.17 | 111.96 | 433.10 | 385.09* |
| Gross Profit       | 98.93  | 102.34 | 110.56 | 410.40 | 377.72* |
| Gross Margin       | 48.6%  | 48.2%  | 49.7%  | 48.7%  | 49.5%   |

\* Starting in 2015, TSMC prepares financial statements in accordance with 2013 IFRSs version endorsed by Taiwan. Under IFRS, the impact of newly effected GAAP shall be retroactively applied. We have adjusted Cost of Revenue and Gross Profit by -NT\$12 million for 2014.

### Revenue Analysis:

In the fourth quarter, demand for TSMC's wafers was impacted by semiconductor supply chain's inventory management. By application, Communication remained flat. Consumer and Industrial/Standard decreased 23% and 12%, respectively, while Computer increased 5%.

By technology, the combined 16/20nm contribution reached 24% of total wafer revenue in the fourth quarter, up from 21% in 3Q15. Advanced technologies (28nm and below) accounted for 49% of total wafer revenue, up from 48% in 3Q15.

From a geographic perspective, revenue from customers based in North America accounted for 69% of total wafer revenue, while revenue from Asia Pacific, China, EMEA (Europe, Middle East, and Africa) and Japan accounted for 10%, 9%, 6%, and 6% of total net revenue, respectively.

On a full year basis, the combined 16/20nm contribution reached 20% of total wafer revenue in 2015, up from 9% in 2014. Advanced technologies (28nm and below) accounted for 48% of total wafer revenue, up from 42% in 2014.

In 2015, revenue from customers based in North America accounted for 68% of total wafer revenue, while revenue from Asia Pacific, China, EMEA (Europe, Middle East, and Africa) and Japan accounted for 12%, 8%, 7%, and 5% of total net revenue, respectively.

### Gross Profit Analysis:

Gross margin was 48.6% in 4Q15, 0.4 percentage point higher than 3Q15, mainly as the benefits from cost improvement and a favorable foreign exchange rate more than offset the impact from lower capacity utilization.

On a full year basis, gross margin was 48.7% in 2015, down 0.8 percentage point from 2014, mainly reflecting a decline in capacity utilization rate, partially offset by a favorable foreign exchange rate. Despite a decline in 2015 gross margin, continued improvement in manufacturing efficiency led to structural improvement in profitability.

## II - 2. Operating Income Analysis

| (In NT\$ billions)                                  | <u>4Q15</u>    | <u>3Q15</u>    | <u>4Q14</u>    | <u>2015</u>    | <u>2014</u>                |
|---|----------------|----------------|----------------|----------------|----------------------------|
| <b>Total Operating Expenses</b>                     | <b>(21.22)</b> | <b>(22.16)</b> | <b>(21.57)</b> | <b>(88.47)</b> | <b>(80.85)<sup>*</sup></b> |
| Research & Development                              | (15.67)        | (16.49)        | (15.94)        | (65.55)        | (56.83) <sup>*</sup>       |
| SG&A  | (5.55)         | (5.67)         | (5.63)         | (22.92)        | (24.02)                    |
| <b>Other Operating Income and Expenses</b>          | <b>0.25</b>    | <b>(1.79)</b>  | <b>(0.77)</b>  | <b>(1.88)</b>  | <b>(1.00)</b>              |
| <b>Operating Income</b>                             | <b>77.96</b>   | <b>78.39</b>   | <b>88.22</b>   | <b>320.05</b>  | <b>295.87<sup>*</sup></b>  |
| <b>Operating Margin</b>                             | <b>38.3%</b>   | <b>36.9%</b>   | <b>39.6%</b>   | <b>37.9%</b>   | <b>38.8%</b>               |
| <b>Total Operating Expenses as % of Net Revenue</b> | <b>10.4%</b>   | <b>10.5%</b>   | <b>9.7%</b>    | <b>10.5%</b>   | <b>10.6%</b>               |

\* Starting in 2015, TSMC prepares financial statements in accordance with 2013 IFRSs version endorsed by Taiwan. Under IFRS, the impact of newly effected GAAP shall be retroactively applied. We have adjusted Total Operating Expenses, Research & Development Expenses and Operating Income by -NT\$7 million, -NT\$5 million, and -NT\$20 million for 2014, respectively.

## II - 3. Non-Operating Items

| (In NT\$ billions)               | <u>4Q15</u>   | <u>3Q15</u>   | <u>4Q14</u>   | <u>2015</u>   | <u>2014</u>   |
|----------------------------------|---------------|---------------|---------------|---------------|---------------|
| <b>L-T Investments</b>           | <b>1.26</b>   | <b>0.93</b>   | <b>0.91</b>   | <b>4.13</b>   | <b>3.95</b>   |
| SSMC                             | 0.55          | 0.66          | 0.38          | 2.48          | 1.89          |
| Others                           | 0.71          | 0.27          | 0.53          | 1.65          | 2.06          |
| <b>Interest Expenses</b>         | <b>(0.82)</b> | <b>(0.79)</b> | <b>(0.82)</b> | <b>(3.19)</b> | <b>(3.24)</b> |
| <b>Other Gains and Losses</b>    | <b>2.24</b>   | <b>4.87</b>   | <b>1.01</b>   | <b>29.44</b>  | <b>5.50</b>   |
| <b>Total Non-Operating Items</b> | <b>2.68</b>   | <b>5.01</b>   | <b>1.10</b>   | <b>30.38</b>  | <b>6.21</b>   |

## III. Financial Condition Review

### III - 1. Liquidity Analysis (Balance Sheet Items)

| (In NT\$ billions)                              | <u>4Q15</u>   | <u>3Q15</u>   | <u>4Q14</u>   |
|---|---------------|---------------|---------------|
| Cash & Marketable Securities                    | 586.16        | 524.88        | 436.92        |
| Accounts Receivable                             | 85.57         | 97.12         | 115.05        |
| Inventories                                     | 67.05         | 65.07         | 66.34         |
| Other Current Assets                            | 7.96          | 6.59          | 8.26          |
| <b>Total Current Assets</b>                     | <b>746.74</b> | <b>693.66</b> | <b>626.57</b> |
| Short-term Loans                                | 39.47         | 33.56         | 36.16         |
| Accounts Payable                                | 45.74         | 53.52         | 50.35         |
| Current Portion of Bonds Payable and Bank Loans | 23.52         | 23.52         | 0.00          |
| Accrued Liabilities and Others                  | 103.50        | 91.09         | 114.50        |
| <b>Total Current Liabilities</b>                | <b>212.23</b> | <b>201.69</b> | <b>201.01</b> |
| Current Ratio (x)                               | 3.5           | 3.4           | 3.1           |
| <b>Net Working Capital</b>                      | <b>534.51</b> | <b>491.97</b> | <b>425.56</b> |

### Operating Income Analysis:

Total operating expenses represented 10.4% of net revenue in 4Q15, compared with 10.5% in the prior quarter. Other operating income was NT\$0.25 billion, increased by NT\$2.04 billion from 3Q15, mainly attributed to a loss of NT\$2.35 billion on cease of TSMC Solar operations during 3Q15.

For full year 2015, total operating expenses represented 10.5% of net revenue, similar to the level in 2014.

### Non-Operating Items:

Total non-operating items were a gain of NT\$2.68 billion in 4Q15, compared to NT\$5.01 billion in 3Q15. The sequential change mainly reflected the difference between disposal gains on ASML shares in these two quarters.

On a full year basis, total non-operating items increased by NT\$24.17 billion to a gain of NT\$30.38 billion in 2015, mainly reflecting the disposal gains of NT\$22.07 billion on ASML shares. Gains from share disposals in 2015 totaled NT\$24.67 billion (NT\$0.84 EPS), compared to NT\$2.39 billion (NT\$0.08 EPS) in 2014.

### Liquidity Analysis:

At the end of 4Q15, cash and marketable securities increased by NT\$61.28 billion to NT\$586.16 billion, primarily attributed to free cash flow of NT\$60.15 billion generated during the quarter (please refer to page 5).

Total current liabilities increased by NT\$10.54 billion, mainly reflecting the accrual of NT\$8.40 billion for income tax payable and short-term borrowing of NT\$5.77 billion for currency hedging purpose.

Net working capital was NT\$534.51 billion and current ratio was 3.5x.

### III - 2. Receivable/Inventory Days

(In Number of Days)

|                    | <u>4Q15</u> | <u>3Q15</u> | <u>4Q14</u> |
|--------------------|-------------|-------------|-------------|
| Days of Receivable | 41          | 42          | 47          |
| Days of Inventory  | 62          | 59          | 58          |

### Receivable and Inventory Days:

Days of receivable decreased by 1 day to 41 days.

Days of inventory increased by 3 days to 62 days, mainly reflecting higher work-in-process inventories on leading node.

### III - 3. Debt Service

(In NT\$ billions)

|                              | <u>4Q15</u>   | <u>3Q15</u>   | <u>4Q14</u>   |
|------------------------------|---------------|---------------|---------------|
| Cash & Marketable Securities | 586.16        | 524.88        | 436.92        |
| Interest-Bearing Debts       | (254.99)      | (249.09)      | (250.68)      |
| <b>Net Cash Reserves</b>     | <b>331.17</b> | <b>275.79</b> | <b>186.24</b> |

### Debt Service:

Net cash reserves increased NT\$55.38 billion to NT\$331.17 billion in 4Q15, as the Company continued to accumulate cash generated from its core business after cash dividends were paid in 3Q15.

## IV. Cash Flow

### IV - 1.1. Quarterly Cash Flow Analysis

(In NT\$ billions)

|   | <u>4Q15</u>     | <u>3Q15</u>    | <u>4Q14</u>    |
|---|-----------------|----------------|----------------|
| Income before Income Tax                | 80.64           | 83.39          | 89.31*         |
| Depreciation & Amortization             | 56.26           | 56.15          | 56.42          |
| Other Operating Sources/(Uses)          | 7.77            | (21.40)        | 7.94*          |
| <b>Total Operating Sources/(Uses)</b>   | <b>144.67</b>   | <b>118.14</b>  | <b>153.67</b>  |
| Capital Expenditures                    | (84.52)         | (70.30)        | (52.42)        |
| Marketable Financial Instruments        | (15.87)         | 11.98          | (4.46)         |
| Other Investing Sources/(Uses)          | (0.79)          | 3.53           | 1.44           |
| <b>Net Investing Sources/(Uses)</b>     | <b>(101.18)</b> | <b>(54.79)</b> | <b>(55.44)</b> |
| Increase (Decrease) in Short-term Loans | 5.77            | 27.70          | (2.04)         |
| Cash Dividends                          | 0.00            | (116.68)       | 0.00           |
| Other Financing Sources/(Uses)          | (0.45)          | (1.50)         | 29.68          |
| <b>Net Financing Sources/(Uses)</b>     | <b>5.32</b>     | <b>(90.48)</b> | <b>27.64</b>   |
| <b>Exchange Rate Changes and Other</b>  | <b>(1.85)</b>   | <b>13.96</b>   | <b>6.70</b>    |
| <b>Net Cash Position Changes</b>        | <b>46.96</b>    | <b>(13.17)</b> | <b>132.57</b>  |
| <b>Ending Cash Balance</b>              | <b>562.69</b>   | <b>515.73</b>  | <b>358.45</b>  |

### Summary of Cash Flow:

During the fourth quarter, cash generated from operating activities totaled NT\$144.67 billion, including NT\$56.26 billion from depreciation & amortization expenses and NT\$7.77 billion from other operating sources.

Net cash used in investing activities were NT\$101.18 billion in 4Q15, primarily including capital expenditures of NT\$84.52 billion, net purchases of NT\$18.12 billion in fixed income securities, and proceeds of NT\$2.25 billion from disposal of ASML shares

Cash flow from financing activities was NT\$5.32 billion, mainly reflecting the increase in short-term loans.

As a result, net cash position increased NT\$46.96 billion to NT\$562.69 billion at the end of 4Q15.

\* Starting in 2015, TSMC prepares financial statements in accordance with 2013 IFRSs version endorsed by Taiwan. Under IFRS, the impact of newly effected GAAP shall be retroactively applied. We have adjusted Income before Income Tax and Other Operating Sources by -NT\$5 million and NT\$5 million for 4Q14, respectively.

#### IV - 1.2. Annual Cash Flow Analysis

| (In NT\$ billions)                     | <u>2015</u>     | <u>2014</u>     | <u>Diff.</u>   |
|--|-----------------|-----------------|----------------|
| Income before Income Tax               | 350.43          | 302.08*         | 48.35          |
| Depreciation & Amortization            | 222.51          | 200.25          | 22.26          |
| Other Operating Sources/(Uses)         | (43.05)         | (80.80)*        | 37.75          |
| <b>Total Operating Sources/(Uses)</b>  | <b>529.89</b>   | <b>421.53</b>   | <b>108.36</b>  |
| Capital Expenditure                    | (257.52)        | (288.54)        | 31.02          |
| Marketable Financial Instruments       | 32.72           | (2.09)          | 34.81          |
| Other Investing Sources/(Uses)         | 7.54            | 8.21            | (0.67)         |
| <b>Net Investing Sources/(Uses)</b>    | <b>(217.26)</b> | <b>(282.42)</b> | <b>65.16</b>   |
| Short-term Loans                       | 3.14            | 18.57           | (15.43)        |
| Cash Dividends                         | (116.68)        | (77.79)         | (38.89)        |
| Other Financing Sources/(Uses)         | (3.19)          | 26.89           | (30.08)        |
| <b>Net Financing Sources/(Uses)</b>    | <b>(116.73)</b> | <b>(32.33)</b>  | <b>(84.40)</b> |
| <b>Exchange Rate Changes and Other</b> | <b>8.34</b>     | <b>8.97</b>     | <b>(0.63)</b>  |
| <b>Net Cash Position Changes</b>       | <b>204.24</b>   | <b>115.75</b>   | <b>88.49</b>   |
| <b>Ending Cash Balance</b>             | <b>562.69</b>   | <b>358.45</b>   | <b>204.24</b>  |

\* Starting in 2015, TSMC prepares financial statements in accordance with 2013 IFRSs version endorsed by Taiwan. Under IFRS, the impact of newly effected GAAP shall be retroactively applied. We have adjusted Income before Income Tax and Other Operating Sources by -NT\$19 million and NT\$19 million for 2014, respectively.

#### Summary of Cash Flow:

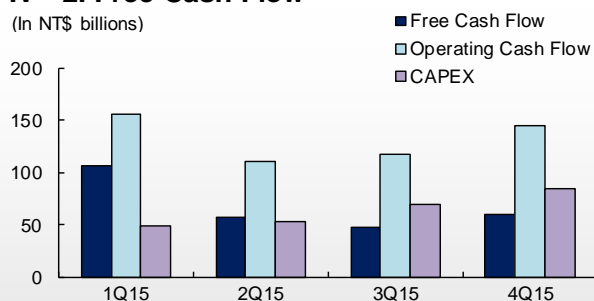
On a full year basis, cash generated from operating activities totaled NT\$529.89 billion, including (1) NT\$222.51 billion from depreciation & amortization, and (2) NT\$43.05 billion for other operating uses, which mainly reflected NT\$40.94 billion in income tax payment.

Net cash used in investing activities were NT\$217.26 billion, primarily including capital expenditures of NT\$257.52 billion, proceeds of NT\$56.18 billion from disposal of ASML shares, and net purchases of NT\$23.52 billion of fixed income securities.

Net cash used in financing activities totaled NT\$116.73 billion, mainly reflecting the payment of cash dividends.

At the end of 2015, cash position reached NT\$562.69 billion, an increase of NT\$204.24 billion from 2014.

#### IV - 2. Free Cash Flow



| (In NT\$ billions)    | 1Q15          | 2Q15         | 3Q15         | 4Q15         |
|-----------------------|---------------|--------------|--------------|--------------|
| <b>Free Cash Flow</b> | <b>107.12</b> | <b>57.26</b> | <b>47.84</b> | <b>60.15</b> |
|                       | <b>272.37</b> |              |              |              |

#### Operating and Free Cash Flow:

Free cash flow increased NT\$12.31 billion to NT\$60.15 billion in 4Q15, reflecting higher operating cash flow, partially offset by higher capital expenditures.

Total free cash flow generated in 2015 was NT\$272.37 billion, more than doubled from NT\$132.99 billion in 2014 due to higher operating cash flow and lower capital expenditures.

#### V. CapEx & Capacity

##### V. Capital Expenditures

| (in US\$ millions)          | <u>4Q15</u>  | <u>3Q15</u>  | <u>2Q15</u>  | <u>1Q15</u>  | <u>2015</u>  |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| <b>Capital Expenditures</b> | <b>2,617</b> | <b>2,214</b> | <b>1,742</b> | <b>1,550</b> | <b>8,123</b> |

#### Capital Expenditures and Capacity:

Capital expenditures for TSMC on a consolidated basis totaled US\$2.62 billion in 4Q15 and US\$8.12 billion for the year.

On a full year basis, total capacity increased 12% year-over-year to above 9 million 12-inch equivalent wafers in 2015.

## VI. Recap of Recent Important Events & Announcements

- TSMC Ranked No. 1 in Semiconductor Manufacturing by IEEE Spectrum Patent Power Scorecard ( 2015/12/17 )
- TSMC Applies for 12-inch Wafer Fab and Design Service Center in China ( 2015/12/07 )
- TSMC Recognizes Outstanding Suppliers at Supply Chain Management Forum ( 2015/12/03 )
- TSMC to Sell 5.1% of Xintec Inc. ( 2015/11/27 )
- TSMC to Sell 6% of Motech Industries, Inc. ( 2015/11/27 )