

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 20-F

REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2018

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

OR

SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of event requiring this shell company report

Commission file number 001-37928

南茂科技股份有限公司
(Exact Name of Registrant as Specified in Its Charter)

ChipMOS TECHNOLOGIES INC.
(Translation of Registrant's Name into English)

Republic of China
(Jurisdiction of Incorporation or Organization)

**No. 1, R&D Road 1, Hsinchu Science Park
Hsinchu, Taiwan
Republic of China**
(Address of Principal Executive Offices)

**Silvia Su
Vice President, Finance and Accounting Management Center
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**No. 1, R&D Road 1, Hsinchu Science Park
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Republic of China
Telephone: (886) 3 577 0055
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(Name, Telephone, E-mail and/or Facsimile Number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

<u>Title of Each Class</u>	<u>Name of Each Exchange on Which Registered</u>
Common Shares, par value NT\$10 per share*	The NASDAQ Global Select Market*

Securities registered or to be registered pursuant to Section 12(g) of the Act:

None
(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None
(Title of Class)

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

As of December 31, 2018, 727,264,797 Common Shares, par value NT\$10 each, were outstanding (not including 25,592,885 Common Shares held by the Company).

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or (15)(d) of the Securities Exchange Act of 1934. Yes No

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of "large accelerated filer", "accelerated filer", and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large Accelerated Filer Accelerated Filer Non-Accelerated Filer Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing.

US GAAP International Financial Reporting Standards as issued by the International Accounting Standards Board Other

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

* Not for trading, but only in connection with the listing on The NASDAQ Global Select Market of American Depositary Receipts evidencing American Depositary Shares (the "ADSs"), each representing twenty common shares of ChipMOS TECHNOLOGIES INC.

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**CAUTIONARY STATEMENT FOR PURPOSES OF THE “SAFE HARBOR” PROVISIONS OF
THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995**

Except for historical matters, the matters discussed in this Annual Report on Form 20-F are forward-looking statements that are subject to a number of significant risks and uncertainties and are based on information as of the date hereof. These statements are generally indicated by the use of forward-looking terminology such as the words “anticipate”, “believe”, “estimate”, “expect”, “intend”, “may”, “plan”, “project”, “will”, “could”, “might”, “should” and other words and phrases of similar import that express an indication of actions or results of actions that may or are expected to occur in the future. These statements appear in a number of places throughout this Annual Report on Form 20-F and include statements regarding our intentions, beliefs or current expectations concerning, among other things, our results of operations, financial condition, liquidity, prospects, growth, strategies and the industries in which we operate.

By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. Forward-looking statements are not guarantees of future performance and our actual results of operations, financial condition and liquidity, and the development of the industries in which we operate may differ materially from those made in or suggested by the forward-looking statements contained in this Annual Report on Form 20-F. Important factors that could cause those differences include, but are not limited to:

- the volatility of the semiconductor industry and the market for end-user applications for semiconductor products;
- overcapacity in the semiconductor assembly and test markets;
- the increased competition from other companies and our ability to retain and increase our market share;
- our ability to successfully develop new technologies and remain a technological leader;
- our ability to maintain control over capacity expansion and facility modifications;
- our ability to generate growth or profitable growth;
- our ability to hire and retain qualified personnel;
- our ability to acquire required equipment and supplies to meet customer demand;
- our ability to raise debt or equity financing as required to meet certain existing obligations;
- our reliance on the business and financial condition of certain major customers;
- the success of any of our future acquisitions, investments or joint ventures;
- the outbreak of contagious disease and occurrence of earthquakes, typhoons and other natural disasters, as well as industrial accidents;
- the political stability of the regions in which we conduct operations;
- general local and global economic and financial conditions; and
- other factors set forth under the heading “Item 3. Key Information—Risk Factors” of this Annual Report on Form 20-F.

The factors identified above are believed to be important factors (but not necessarily all of the important factors) that could cause actual results to differ materially from those expressed in any forward-looking statement made by us. Other factors not discussed herein could also have material adverse effects on us. All forward-looking statements included in this Annual Report on Form 20-F are expressly qualified in their entirety by the foregoing cautionary statements. We undertake no obligation to update any forward-looking statement (or its associated cautionary language), whether as a result of new information or future events.

Forward-looking statements include, but are not limited to, statements regarding our strategy and future plans, future business condition and financial results, our capital expenditure plans, our capacity expansion plans, our investments in Mainland China, technological upgrades, investment in research and development, future market demand, future regulatory or other developments in our industry. Please see “Item 3. Key Information—Risk Factors” for a further discussion of certain factors that may cause actual results to differ materially from those indicated by our forward-looking statements.

This Annual Report on Form 20-F includes, refers to, or incorporates by reference, as applicable, financial statements and other financial information based on International Financial Reporting Standards (“IFRSs”).

PART I

Item 1. Identity of Directors, Senior Management and Advisers

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

Selected Financial Data

The following tables set forth our selected consolidated financial data. As a result of the unprecedented transaction of the merger with ChipMOS TECHNOLOGIES (Bermuda) LTD. (“ChipMOS Bermuda”) accounted as capital reorganization and the joint-venture agreement which reclassified Unimos Microelectronics (Shanghai) Co., Ltd. (“Unimos Shanghai”) (formerly known as ChipMOS TECHNOLOGIES (Shanghai) LTD.) as discontinued operations (see “Item 5. Operating and Financial Review and Prospects—Recent Acquisitions”), the following financial data as of and for the years ended December 31, 2014 and 2015 were restated retrospectively. The selected consolidated statements of financial position data as of December 31, 2017 and 2018 and our consolidated income statements and cash flows data for the years ended December 31, 2016, 2017 and 2018 are derived from our audited consolidated financial statements included herein, and should be read in conjunction with, and are qualified in their entirety by reference to, these audited consolidated financial statements and related notes beginning on page F-1 of this Annual Report on Form 20-F. The selected consolidated statements of financial position data as of December 31, 2014, 2015 and 2016, and the consolidated income statements and cash flows data for the year ended December 31, 2014 and 2015, are derived from our consolidated financial statements not included herein.

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	Year ended December 31,					
	2014 NT\$	2015 NT\$	2016 NT\$	2017 NT\$	2018 NT\$	2018 US\$
(in millions, except per share data and per ADS data)						
Consolidated Income Statements Data:						
Revenue	\$ 20,829.0	\$ 18,837.1	\$ 18,387.6	\$ 17,940.9	\$ 18,480.0	\$ 603.7
Cost of revenue	(15,716.5)	(14,685.5)	(14,745.5)	(14,703.7)	(15,050.0)	(491.6)
Gross profit	5,112.5	4,151.6	3,642.1	3,237.2	3,430.0	112.1
Research and development expenses	(678.8)	(747.8)	(838.9)	(985.9)	(939.3)	(30.7)
Sales and marketing expenses	(96.3)	(90.3)	(72.9)	(64.4)	(53.4)	(1.7)
General and administrative expenses	(712.8)	(770.1)	(822.1)	(639.8)	(485.1)	(15.9)
Other operating income (expenses), net	26.2	105.1	90.3	692.8	147.5	4.8
Operating profit	3,650.8	2,648.5	1,998.5	2,239.9	2,099.7	68.6
Finance costs	(133.8)	(142.5)	(179.1)	(217.3)	(190.3)	(6.2)
Share of profit (loss) of associates	—	31.3	28.9	(179.5)	(300.1)	(9.8)
Other non-operating income (expenses), net	1,185.9	308.8	(147.9)	(310.7)	173.1	5.6
Profit before income tax	4,702.9	2,846.1	1,700.4	1,532.4	1,782.4	58.2
Income tax expense	(1,036.2)	(935.9)	(177.1)	(550.5)	(456.6)	(14.9)
Profit from the continuing operations	3,666.7	1,910.2	1,523.3	981.9	1,325.8	43.3
Profit (loss) from the discontinued operations	82.2	(34.2)	(122.1)	1,815.0	—	—
Profit for the year	\$ 3,748.9	\$ 1,876.0	\$ 1,401.2	\$ 2,796.9	\$ 1,325.8	\$ 43.3
Attributable to:						
Equity holders of the Company—continuing operations	\$ 3,274.0	\$ 2,164.5	\$ 1,829.3	\$ 981.9	\$ 1,325.8	\$ 43.3
Equity holders of the Company—discontinued operations	82.2	(34.2)	(122.1)	1,815.0	—	—
Predecessors' interests	(142.0)	(291.4)	(306.0)	—	—	—
Non-controlling interests	534.7	37.1	—	—	—	—
	\$ 3,748.9	\$ 1,876.0	\$ 1,401.2	\$ 2,796.9	\$ 1,325.8	\$ 43.3
Basic earnings per share:						
Equity holders of the Company—continuing operations	\$ 3.81	\$ 2.47	\$ 2.13	\$ 1.16	\$ 1.65	\$ 0.05
Equity holders of the Company—discontinued operations	0.10	(0.04)	(0.14)	2.14	—	—
Equity holders of the Company	3.91	2.43	1.99	3.30	1.65	0.05
Predecessors' interests	(0.17)	(0.33)	(0.35)	—	—	—
	\$ 3.74	\$ 2.10	\$ 1.64	\$ 3.30	\$ 1.65	\$ 0.05
Diluted earnings per share:						
Equity holders of the Company—continuing operations	\$ 3.78	\$ 2.44	\$ 2.11	\$ 1.13	\$ 1.63	\$ 0.05
Equity holders of the Company—discontinued operations	0.09	(0.04)	(0.14)	2.10	—	—
Equity holders of the Company	3.87	2.40	1.97	3.23	1.63	0.05
Predecessors' interests	(0.16)	(0.33)	(0.35)	—	—	—
	\$ 3.71	\$ 2.07	\$ 1.62	\$ 3.23	\$ 1.63	\$ 0.05
Basic earnings per equivalent ADS:						
Equity holders of the Company—continuing operations	\$ 76.25	\$ 49.34	\$ 42.56	\$ 23.20	\$ 33.03	\$ 1.08
Equity holders of the Company—discontinued operations	1.92	(0.78)	(2.84)	42.87	—	—
Equity holders of the Company	78.17	48.56	39.72	66.07	33.03	1.08
Predecessors' interests	(3.31)	(6.64)	(7.12)	—	—	—
	\$ 74.86	\$ 41.92	\$ 32.60	\$ 66.07	\$ 33.03	\$ 1.08
Diluted earnings per equivalent ADS:						
Equity holders of the Company—continuing operations	\$ 75.62	\$ 48.73	\$ 42.21	\$ 22.68	\$ 32.59	\$ 1.06
Equity holders of the Company—discontinued operations	1.90	(0.77)	(2.82)	41.93	—	—
Equity holders of the Company	77.52	47.96	39.39	64.61	32.59	1.06
Predecessors' interests	(3.28)	(6.56)	(7.06)	—	—	—
	\$ 74.24	\$ 41.40	\$ 32.33	\$ 64.61	\$ 32.59	\$ 1.06
Weighted-average number of shares outstanding:						
Basic	858.7	877.4	859.6	846.7	802.7	802.7
Diluted	865.8	888.3	866.8	865.8	813.7	813.7

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	As of December 31,					
	2014 NT\$	2015 NT\$	2016 NT\$	2017 NT\$	2018 NT\$	2018 US\$
(in millions)						
Consolidated Statements of Financial Position Data:						
Non-current assets:						
Available-for-sale financial assets	\$ 217.7	\$ 10.0	\$ 10.0	\$ 20.9	\$ —	\$ —
Non-current financial assets at fair value through profit or loss	—	—	—	—	11.5	0.4
Non-current financial assets at fair value through the other comprehensive income	—	—	—	—	174.4	5.7
Investment in associates	—	346.3	369.3	3,433.3	3,863.7	126.2
Non-current financial assets at amortized cost	—	—	—	—	99.1	3.2
Property, plant and equipment	13,604.1	14,211.6	13,497.2	15,265.3	16,819.6	549.5
Other non-current assets	315.9	341.6	523.5	339.4	277.3	9.0
	<u>14,137.7</u>	<u>14,909.5</u>	<u>14,400.0</u>	<u>19,058.9</u>	<u>21,245.6</u>	<u>694.0</u>
Current assets:						
Inventories	1,704.7	1,667.7	1,878.0	1,929.2	1,778.8	58.1
Current financial assets at amortized cost	—	—	—	—	169.2	5.5
Current contract assets	—	—	—	—	299.8	9.8
Accounts and notes receivable	4,876.7	3,890.5	4,140.2	4,015.8	4,747.4	155.1
Other current assets	1,088.5	422.8	201.3	220.3	250.4	8.2
Cash and cash equivalents	15,265.2	12,127.4	7,571.4	8,035.7	4,642.5	151.7
	<u>22,935.1</u>	<u>18,108.4</u>	<u>13,790.9</u>	<u>14,201.0</u>	<u>11,888.1</u>	<u>388.4</u>
Non-current assets held for sale	—	—	3,105.1	—	—	—
	<u>22,935.1</u>	<u>18,108.4</u>	<u>16,896.0</u>	<u>14,201.0</u>	<u>11,888.1</u>	<u>388.4</u>
Total assets	<u>\$37,072.8</u>	<u>\$33,017.9</u>	<u>\$31,296.0</u>	<u>\$33,259.9</u>	<u>\$33,133.7</u>	<u>\$1,082.4</u>
Equity and liabilities:						
Equity attributable to equity holders of the Company	\$18,083.9	\$18,906.9	\$16,247.7	\$18,120.9	\$18,021.2	\$ 588.7
Non-controlling interests	2,621.6	—	—	—	—	—
Predecessors' interests	2,490.7	2,127.5	—	—	—	—
Total equity	<u>23,196.2</u>	<u>21,034.4</u>	<u>16,247.7</u>	<u>18,120.9</u>	<u>18,021.2</u>	<u>588.7</u>
Non-current liabilities:						
Long-term bank loans	4,560.0	4,985.8	9,687.7	7,498.9	9,042.1	295.4
Long-term lease obligations payable	—	—	29.3	18.1	—	—
Other non-current liabilities	586.9	610.8	641.0	679.0	830.6	27.1
	<u>5,146.9</u>	<u>5,596.6</u>	<u>10,358.0</u>	<u>8,196.0</u>	<u>9,872.7</u>	<u>322.5</u>
Current liabilities:						
Current contract liabilities	—	—	—	—	1.5	0.1
Accounts payable	1,074.9	708.5	825.1	688.2	637.6	20.8
Payable to contractors and equipment suppliers	1,307.5	524.0	550.3	713.3	1,516.7	49.6
Other payables	1,905.3	1,868.7	1,412.1	1,980.2	1,678.7	54.8
Other current liabilities	1,165.5	588.1	241.6	436.9	640.1	20.9
Long-term lease obligations payable, current portion	—	—	11.3	11.8	17.8	0.6
Long-term bank loans, current portion	1,508.2	1,548.7	1,062.3	2,143.2	747.4	24.4
Short-term bank loans	1,768.3	1,148.9	—	969.4	—	—
	<u>8,729.7</u>	<u>6,386.9</u>	<u>4,102.7</u>	<u>6,943.0</u>	<u>5,239.8</u>	<u>171.2</u>
Liabilities directly related to non-current assets held for sale	—	—	587.6	—	—	—
	<u>8,729.7</u>	<u>6,386.9</u>	<u>4,690.3</u>	<u>6,943.0</u>	<u>5,239.8</u>	<u>171.2</u>
Total liabilities	<u>13,876.6</u>	<u>11,983.5</u>	<u>15,048.3</u>	<u>15,139.0</u>	<u>15,112.5</u>	<u>493.7</u>
Total equity and liabilities	<u>\$37,072.8</u>	<u>\$33,017.9</u>	<u>\$31,296.0</u>	<u>\$33,259.9</u>	<u>\$33,133.7</u>	<u>\$1,082.4</u>

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	Year ended December 31,					
	2014	2015	2016	2017	2018	2018
	NT\$	NT\$	NT\$	NT\$	NT\$	US\$
(in millions)						
Consolidated Statement of Cash Flows Data:						
Capital expenditures	\$ 3,568.2	\$ 3,644.6	\$ 4,691.0	\$ 4,849.3	\$ 4,945.6	\$ 161.6
Depreciation and amortization	2,909.0	3,021.9	3,231.3	2,899.3	3,376.6	110.3
Net cash provided by (used in):						
Operating activities	5,599.9	5,395.8	3,688.0	4,157.3	4,129.2	134.9
Investing activities	(3,325.4)	(4,504.2)	(4,556.7)	(3,493.4)	(5,129.3)	(167.6)
Financing activities	(418.8)	(4,028.9)	(3,223.9)	(550.8)	(2,400.4)	(78.4)
Effect of exchange rate changes	36.7	(0.5)	(73.5)	(38.6)	7.3	0.2
Net increase (decrease) in cash and cash equivalents	\$ 1,892.4	\$ (3,137.8)	\$ (4,166.1)	\$ 74.5	\$ (3,393.2)	\$ (110.9)

Exchange Rates

References to “US\$” and “US dollars” are to United States dollars and references to “NT\$” and “NT dollars” are to New Taiwan dollars. This Annual Report on Form 20-F contains translations of certain NT dollar amounts into US dollars at specified rates solely for the convenience of the reader. Unless otherwise noted, all translations from NT dollars to US dollars and from US dollars to NT dollars were made at the noon buying rate in The City of New York for cable transfers in NT dollars per US dollar as certified for customs purposes by the Federal Reserve Bank of New York as of December 31, 2018, which was NT\$30.61 to US\$1.00. We make no representation that the NT dollar or US dollar amounts referred to in this Annual Report on Form 20-F could have been or could be converted into US dollars or NT dollars, as the case may be, at any particular rate or at all.

Risk Factors

Risks Relating to Economic Conditions and the Financial Markets

Global credit and financial markets disruptions could materially and adversely affect our business and results of operations.

Disruptions in global credit, financial markets and trade tensions may occur that causes diminished liquidity and limited availability of credit, reduced consumer confidence, reduced economic growth, increased unemployment rates and uncertainty about economic stability. Limited availability of credit in financial markets may lead consumers and businesses to postpone spending. This in turn may cause our customers to cancel, decrease or delay their existing and future orders with us. Particularly, the economics uncertainty caused by trade tensions will impact the end product market demand. It directly affects the inventory elimination of our customers. Financial difficulties experienced by our customers or suppliers as a result of these conditions could lead to production delays and delays or defaults in payment of accounts receivable. Continuing credit markets disruption restricts our access to capital and limits our ability to fund operations or to refinance maturing obligations as they become due through additional borrowing or other sources of financing. We are not able to predict the occurrence, frequency, duration or extent of disruptions in global credit and financial markets. And when the trade tensions could be settled down. These conditions increase the difficulty of accurately forecasting and planning our business activities. If these conditions and uncertainties occur or continue, or if credit and financial markets and confidence in economic conditions deteriorate, our business and results of operations could be materially and adversely affected.

Risks Relating to Our Industry

Because we depend on the highly cyclical semiconductor industry, which is characterized by significant and sometimes prolonged downturns from time to time, our revenue and earnings may fluctuate significantly, which in turn could adversely affect our results of operations and could cause the market price of our common shares or of our ADSs to decline.

Because our business is, and will continue to be, dependent on the requirements of semiconductor companies for independent assembly and test services, any downturn in the highly cyclical semiconductor industry may reduce demand for our services and adversely affect our results of operations. All of our customers operate in this industry and variations in order levels and in service fee from our customers may result in volatility in our revenue and earnings. For instance, during periods of decreased demand for assembled semiconductors, some of our customers may simplify, delay or forego final testing of certain types of semiconductors, such as dynamic random access memory or DRAM, which in turn may result in reduced demand for our services, adversely affecting our results of operations. From time to time, the semiconductor industry has experienced significant, and sometimes prolonged, downturns which have adversely affected our results of operations. Reduced commodity DRAM demand for our services contributed to decreases in our revenue for 2017. Our revenue for 2017 decreased 2.4% from 2016 levels. Our revenue for 2018 increased by 3.0% from 2017 levels and generated a profit attributable to equity holders of the Company of NT\$1,326 million (US\$43 million) in 2018. We cannot give any assurances that there will not be any downturn in the future or that any future downturn will not materially and adversely affect our results of operations.

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Any deterioration in the market for end-user applications for semiconductor products would reduce demand for our services and may result in a decrease in our earnings.

Market conditions in the semiconductor industry track, to a large degree, those for their end-user applications. Any deterioration in the market conditions for the end-user applications of semiconductors we test and assemble could reduce demand for our services and, in turn, could materially adversely affect our financial condition and results of operations. Our revenue is largely attributable to fees derived from testing and assembling semiconductors for use in personal computers, communications equipment, consumer electronic products and display applications. A significant decrease in demand for products in these markets could put pricing pressure on our assembly and test services and negatively affect our revenue and earnings. The LCD driver market often aligns with broader economic trend, we cannot give any assurances that there will not be any downturn in the future or that any future downturn will not affect our results of operations. Any significant decrease in demand for end-user applications of semiconductors will negatively affect our revenue and earnings.

A decline in average selling prices for our services could result in a decrease in our earnings.

Historically, prices for our assembly and test services in relation to any given semiconductor tend to decline over the course of its product and technology life cycle. See also “— A decrease in market demand for LCD and other display panel driver semiconductors may adversely affect our capacity utilization rates and thereby negatively affect our profitability”. If we cannot reduce the cost of our assembly and test services, or introduce higher-margin assembly and test services for new package types, to offset the decrease in average selling prices for our services, our earnings could decrease.

A reversal or slowdown in the outsourcing trend for semiconductor assembly and test services could reduce our profitability.

Integrated device manufacturers, or IDMs, continue to increasingly outsource stages of the semiconductor production process, including assembly and test, to independent companies like us to shorten production cycles. In addition, the availability of advanced independent semiconductor manufacturing services has also enabled the growth of so-called “fabless” semiconductor companies that focus exclusively on design and marketing and outsource their manufacturing, assembly and test requirements to independent companies. A substantial portion of our revenue is indirectly generated from providing semiconductor assembly and test services to these IDMs and fabless companies. We cannot assure you that these companies will continue to outsource their assembly and test requirements to independent companies like us. A reversal of, or a slowdown in, this outsourcing trend could result in reduced demand for our services, which in turn could reduce our profitability.

Risks Relating to Our Business

If we are unable to compete effectively in the highly competitive semiconductor assembly and test markets, we may lose customers and our income may decline.

The semiconductor assembly and test markets are very competitive. We face competition from a number of IDMs with in-house assembly and test capabilities and other independent semiconductor assembly and test companies. Our competitors may have access to more advanced technologies and greater financial and other resources than we do. Many of our competitors have shown a willingness to reduce prices quickly and sharply in the past to maintain capacity utilization in their facilities during periods of reduced demand. In addition, an increasing number of our competitors conduct their operations in lower cost centers in Asia such as Mainland China. Any renewed or continued erosion in the prices or demand for our assembly and test services as a result of increased competition could adversely affect our profits.

We are highly dependent on the market for memory products. A downturn in market prices for these products could significantly reduce our revenue and profit.

A significant portion of our revenue is derived from testing and assembling memory semiconductors. Our revenue derived from the assembly and test of memory semiconductors accounted for 48%, 46% and 43% of our revenue in 2016, 2017 and 2018, respectively. In the past, our service fees for testing and assembling memory semiconductors were sharply reduced in tandem with the decrease in the average selling price of DRAM in the semiconductor industry. Oversupply of DRAM products and weak demand in the DRAM market may result in significant reductions in the price of DRAM products, which in turn may drive down the average prices for our assembly and test services for DRAM products and further reduce our revenue and profit. We cannot assure you that there will not be further downturns in DRAM prices in the future.

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A decrease in market demand for LCD and other display panel driver semiconductors may adversely affect our capacity utilization rates and thereby negatively affect our profitability.

Our assembly and test services for LCD and other display panel driver semiconductors generated revenue of NT\$4,920 million, NT\$4,790 million and NT\$5,695 million (US\$186 million) in 2016, 2017 and 2018, respectively. We invested NT\$910 million, NT\$2,615 million and NT\$2,732 million (US\$89 million) in 2016, 2017 and 2018, respectively, on equipment for tape carrier package, or TCP, chip-on-film, or COF and chip-on-glass, or COG, technologies, which are used in assembly and test services for LCD and other display panel driver semiconductors. Most of this equipment may not be used for technologies other than TCP, COF or COG. The market demand for LCD and other display panel driver semiconductors increased in 2018 particularly the wafer test of TDDI and 12" COF assembly services. Any significant decrease in demand for these products and our related services would significantly impair our capacity utilization rates. That may result in our inability to generate sufficient revenue to cover the significant depreciation expenses for the equipment used in testing and assembling LCD and other display panel driver semiconductors, thereby negatively affecting our profitability. See also “—Because of our high fixed costs, if we are unable to achieve relatively high capacity utilization rates, our earnings and profitability may be adversely affected”.

Our significant amount of indebtedness and interest expense will limit our cash flow and could adversely affect our operations.

We have a significant level of debt and interest expense. As of December 31, 2018, we had approximately NT\$9,790 million (US\$320 million) outstanding long-term indebtedness. Our long-term indebtedness as of December 31, 2018, represented bank loans with an interest rate of 1.7895%. As of December 31, 2018, NT\$8,022 million (US\$262 million) of our indebtedness was secured by collateral comprised of our assets.

Our significant indebtedness poses risks to our business, including the risks that:

- we may have to use a substantial portion of our consolidated cash flow from operations to pay principal and interest on our debt, thereby reducing the funds available for working capital, capital expenditures, acquisitions and other general corporate purposes;
- insufficient cash flow from operations may force us to sell assets, or seek additional capital, which we may be unable to do at all or on terms favorable to us;
- our ability to sell assets or seek additional capital may be adversely affected by security interests in our assets granted to our lenders as collateral; and
- our level of indebtedness may make us more vulnerable to economic or industry downturns.

For additional information on our indebtedness, see “Item 5. Operating and Financial Review and Prospects—Liquidity and Capital Resources”.

Our results of operations may fluctuate significantly and may cause the market price of our common shares or of our ADSs to be volatile.

Our results of operations have varied significantly from period to period and may continue to vary in the future. Among the more important factors affecting our quarterly and annual results of operations are the following:

- our ability to accurately predict customer demand, as we must commit significant capital expenditures in anticipation of future orders;
- our ability to quickly adjust to unanticipated declines or shortfalls in demand and market prices for our assembly and test services, due to our high percentage of fixed costs;
- changes in prices for our assembly and test services;
- volume of orders relative to our assembly and test capacity;
- capital expenditures and production uncertainties relating to the roll-out of new assembly and test services;
- our ability to obtain adequate assembly and test equipment on a timely basis;
- changes in costs and availability of raw materials, equipment and labor;
- changes in our product mix; and
- earthquakes, drought and other natural disasters, as well as industrial accidents.

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Because of the factors listed above, our future results of operations or growth rates may be below the expectations of research analysts and investors. If so, the market price of our common shares or of our ADSs, and the market value of your investment, may fall.

We rely on key customers for a substantial portion of our revenue and a loss of, or deterioration of the business from, or delayed payment by, any one of these customers could result in decreased revenue and materially adversely affect our results of operations and financial condition.

We rely on a small group of customers for a substantial portion of our business. In 2018, our top five customers collectively accounted for 61% of our revenue. As part of our strategy, we have been focusing on sales to key customers through long-term service agreements. We also focus on our business with smaller customers and customers who do not place orders on a regular basis. We expect that we will continue to rely on a relatively limited number of customers for a significant portion of our revenue. Any adverse development in our key customers' operations, competitive position or customer base could materially reduce our revenue and materially adversely affect our business and profitability.

Since semiconductor companies generally rely on service providers with whom they have established relationships to meet their assembly and test needs for their applications and new customers usually require us to pass a lengthy and rigorous qualification process, if we lose any of our key customers, we may not be able to replace them in a timely manner. We cannot assure you that receivable collection difficulties experienced by us will not occur in the future. If any of our key customers reduces or cancels its orders or terminates existing contractual arrangements, and if we are unable to attract new customers and establish new contractual arrangements with existing or new customers, our revenue could be reduced and our business and results of operations may be materially adversely affected.

Because of our high fixed costs, if we are unable to achieve relatively high capacity utilization rates, our earnings and profitability may be adversely affected.

Our operations are characterized by a high proportion of fixed costs. For memory and logic/mixed-signal semiconductor testing services, our fixed costs represented 49%, 48% and 49% of our total cost of revenue in 2016, 2017 and 2018, respectively. For memory and logic/mixed-signal semiconductor assembly services, our fixed costs represented 23%, 25% and 26% of our total cost of revenue in 2016, 2017 and 2018, respectively. For LCD and other display panel driver semiconductor assembly and test services, our fixed costs represented 47%, 46% and 49% of our total cost of revenue in 2016, 2017 and 2018, respectively. For bumping services, our fixed costs represented 28%, 27% and 27% of our total cost of revenue in 2016, 2017 and 2018, respectively. Our profitability depends in part not only on absolute pricing levels for our services, but also on the utilization rates for our assembly and test equipment, commonly referred to as "capacity utilization rates". Increases or decreases in our capacity utilization rates can significantly affect our gross margins as unit costs generally decrease as the fixed costs are allocated over a larger number of units. In the past, our capacity utilization rates have fluctuated significantly as a result of the fluctuations in the market demand for semiconductors. If we fail to increase or maintain our capacity utilization rates, our earnings and profitability may be adversely affected. In addition, the long-term assembly and test services agreements we entered with certain customers may require us to incur significant capital expenditures. If we are unable to achieve high capacity utilization rates for the equipment purchased pursuant to these agreements, our gross margins may be materially and adversely affected.

The assembly and test process is complex and our production yields and customer relationships may suffer as a result of defects or malfunctions in our testing and assembly equipment and the introduction of new packages.

Semiconductor testing and assembly are complex processes that require significant technological and process expertise. Semiconductor testing involves sophisticated test equipment and computer software. We develop computer software to test our customers' semiconductors. We also develop conversion software programs that enable us to test semiconductors on different types of testers. Similar to most software programs, these software programs are complex and may contain programming errors or "bugs". In addition, the testing process is subject to human error by our employees who operate our test equipment and related software. Any significant defect in our testing or conversion software, malfunction in our test equipment or human error could reduce our production yields and damage our customer relationships.

The assembly process involves a number of steps, each of which must be completed with precision. Defective packages primarily result from:

- contaminants in the manufacturing environment;
- human error;
- equipment malfunction;

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- defective raw materials; or
- defective plating services.

These and other factors have, from time to time, contributed to lower production yields. They may do so in the future, particularly as we expand our capacity or change our processing steps. In addition, to be competitive, we must continue to expand our offering of packages. Our production yields on new packages typically are significantly lower than our production yields on our more established packages. Our failure to maintain high standards or acceptable production yields, if significant and prolonged, could result in a loss of customers, increased costs of production, delays, substantial amounts of returned goods and related claims by customers. Further, to the extent our customers have set target production yields, we may be required to compensate our customers in a pre-agreed manner. Any of these problems could materially adversely affect our business reputation and result in reduced revenue and profitability.

Because of the highly cyclical nature of our industry, our capital requirements are difficult to plan. If we cannot obtain additional capital when we need it, we may not be able to maintain or increase our current growth rate and our profits will suffer.

As our industry is highly cyclical and rapidly changing, our capital requirements are difficult to plan. To remain competitive, we may need capital to fund the expansion of our facilities as well as to fund our equipment purchases and research and development activities. To meet our liquidity, capital spending and other capital needs, we have taken and plan to take certain measures to generate additional working capital and to save cash. See “Item 5. Operating and Financial Review and Prospects—Liquidity and Capital Resources”. We cannot assure you that these plans and measures will be implemented or will provide sufficient sources of capital.

In addition, future capacity expansions or market or other developments may require additional funding. Our ability to obtain external financing in the future depends on a number of factors, many of which are beyond our control. They include:

- our future financial condition, results of operations and cash flows;
- general market conditions for financing activities by semiconductor assembly and test companies; and
- economic, political and other conditions in Taiwan and elsewhere.

If we are unable to obtain funding in a timely manner or on acceptable terms, our growth prospects and potential future profitability will suffer.

Disputes over intellectual property rights could be costly, deprive us of technologies necessary for us to stay competitive, render us unable to provide some of our services and reduce our opportunities to generate revenue.

Our ability to compete successfully and achieve future growth will depend, in part, on our ability to protect our proprietary technologies and to secure, on commercially acceptable terms, critical technologies that we do not own. We cannot assure you that we will be able to independently develop, or secure from any third party, the technologies required for our assembly and test services. Our failure to successfully obtain these technologies may seriously harm our competitive position and render us unable to provide some of our services.

Our ability to compete successfully also depends on our ability to operate without infringing upon the proprietary rights of others. The semiconductor assembly and test industry is characterized by frequent litigation regarding patent and other intellectual property rights. We may incur legal liabilities if we infringe upon the intellectual property or other proprietary rights of others. We are not able to ascertain what patent applications have been filed in the United States or elsewhere, however, until they are granted. If any third party succeeds in its intellectual property infringement claims against us or our customers, we could be required to:

- discontinue using the disputed process technologies, which would prevent us from offering some of our assembly and test services;
- pay substantial monetary damages;
- develop non-infringing technologies, which may not be feasible; or
- acquire licenses to the infringed technologies, which may not be available on commercially reasonable terms, if at all.

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Any one of these developments could impose substantial financial and administrative burdens on us and hinder our business. We are, from time to time, involved in litigation in respect of intellectual property rights. Any litigation, whether as plaintiff or defendant, is costly and diverts our resources. If we fail to obtain necessary licenses on commercially reasonable terms or if litigation, regardless of the outcome, relating to patent infringement or other intellectual property matters occurs, our costs could be substantially increased to impact our margins. Any such litigation could also prevent us from testing and assembling particular products or using particular technologies, which could reduce our opportunities to generate revenue.

If we are unable to obtain raw materials and other necessary inputs from our suppliers in a timely and cost-effective manner, our production schedules would be delayed and we may lose customers and growth opportunities and become less profitable.

Our operations require us to obtain sufficient quantities of raw materials at acceptable prices in a timely and cost-effective manner. We source most of our raw materials, including critical materials like leadframes, organic substrates, epoxy, gold wire and molding compound for assembly, and tapes for TCP/COF, from a limited group of suppliers. We purchase all of our materials on a purchase order basis and have no long-term contracts with any of our suppliers. From time to time, suppliers have extended lead times, increased the price or limited the supply of required materials to us because of market shortages. Consequently, we may, from time to time, experience difficulty in obtaining sufficient quantities of raw materials on a timely basis. In addition, from time to time, we may reject materials that do not meet our specifications, resulting in declines in output or yield. Although we typically maintain at least two suppliers for each key raw material, we cannot assure you that we will be able to obtain sufficient quantities of raw materials and other supplies of an acceptable quality in the future. It usually takes from three to six months to switch from one supplier to another, depending on the complexity of the raw material. If we are unable to obtain raw materials and other necessary inputs in a timely and cost-effective manner, we may need to delay our production and delivery schedules, which may result in the loss of business and growth opportunities and could reduce our profitability.

If we are unable to obtain additional assembly and test equipment or facilities in a timely manner and at a reasonable cost, we may be unable to fulfill our customers' orders and may become less competitive and less profitable.

The semiconductor testing and assembly business is capital intensive and requires significant investment in expensive equipment manufactured by a limited number of suppliers. The market for semiconductor assembly and test equipment is characterized, from time to time, by intense demand, limited supply and long delivery cycles. Our operations and expansion plans depend on our ability to obtain equipment from a limited number of suppliers in a timely and cost-effective manner. We have no binding supply agreements with any of our suppliers and we acquire our assembly and test equipment on a purchase order basis, which exposes us to changing market conditions and other significant risks. Semiconductor assembly and test also requires us to operate sizeable facilities. If we are unable to obtain equipment or facilities in a timely manner, we may be unable to fulfill our customers' orders, which could negatively impact our financial condition and results of operations as well as our growth prospects. Currently, we do not have any long-term service agreements that require our commitment to acquire additional assembly and test equipment or facilities. We cannot assure you, however, that such commitment will not be made in the future. See "Item 4. Information on the Company—Customers".

If we are unable to manage the expansion of our operations and resources effectively, our growth prospects may be limited and our future profitability may be reduced.

We expect to continue to expand the operations and to increase the number of employees. Rapid expansion puts a strain on our managerial, technical, financial, operational and other resources. As a result of our expansion, we will need to implement additional operational and financial controls and hire and train additional personnel. We cannot assure you that we will be able to do so effectively in the future, and our failure to do so could jeopardize our expansion plans and seriously harm our operations.

Laws of the Republic of China may be less protective of shareholder rights than laws of the United States or other jurisdictions.

Our corporate affairs are governed by our articles of incorporation and laws governing corporations incorporated in the Republic of China ("ROC"). The rights of our shareholders to bring shareholders' suits against us or our board of directors under the ROC law are more limited than those of the shareholders of U.S. corporations. For example, the ROC Company Act requires that a shareholder that continuously holds at least 1% of our issued and outstanding shares for at least 6 months may request our audit committee to institute an action against a director on the Company's behalf. In addition, the controlling shareholders of U.S. corporations owe fiduciary duties to minority shareholders, while controlling shareholders in ROC corporations do not. Therefore, our shareholders may be less able under the ROC law than they would be under the laws of the United States or other jurisdictions to protect their interests in connection with actions by our management, members of our board of directors or our controlling shareholder.

It may be difficult to bring and enforce suits against us in the United States.

We are incorporated in the ROC and a majority of our directors and most of our officers are not residents of the United States. A substantial portion of our assets is located outside the United States. As a result, it may be difficult for our shareholders to serve notice of a lawsuit on us or our directors and officers within the United States. Because most of our assets are located outside the United States, it may be difficult for our shareholders to enforce the United States judgments of United States courts. Any United States judgments obtained against us will not be enforced by ROC courts if any of the following situations shall apply to such final judgment:

- the court rendering the judgment does not have jurisdiction over the subject matter under the ROC law;
- the judgment was rendered by default, except where the summons or order necessary for the commencement of the action was duly served on us within the jurisdiction of the court rendering the judgment within a reasonable period of time and in accordance with the laws and regulations of such jurisdiction, or with judicial assistance of the ROC;
- the judgment or the court procedures resulting in the judgment are contrary to the public order or good morals of the ROC; or
- the judgments of ROC courts are not recognized and enforceable in the jurisdiction of the court rendering the judgment on a reciprocal basis.

Investor confidence and the market price of our common shares or ADSs may be adversely impacted if we are unable to maintain effective internal control over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act of 2002.

We are required to comply with the ROC and US securities laws and regulations in connection with internal controls. As a public company in the United States, our management is required to assess the effectiveness of our internal control over financial reporting using the criteria established in Internal Control – Integrated Framework (2013) issued by Committee of Sponsoring Organization of the Treadway Commission (COSO), as required by Section 404 of the Sarbanes-Oxley Act of 2002. We carried out an evaluation, under the supervision and with the participation of management, including our President, the principal executive officer and Vice President of the Finance and Accounting Management Center, the principal financial officer of the effectiveness of the design and operation of our internal controls over financial reporting as of December 31, 2018, and concluded those internal controls over financial reporting were effective as of that date. See “Item 15. Controls and Procedures” for more information. Moreover, even if our management concludes that our internal controls over our financial reporting are effective, our independent public registered accounting firm may disagree. If our independent public registered accounting firm is not satisfied with our internal controls over our financial reporting or the level at which our controls are documented, designed, operated or reviewed, or if the independent public registered accounting firm interprets the requirements, rules or regulations differently from us, it may decline to attest to our management’s assessment or may issue an adverse opinion in the future. Any of these possible outcomes could result in an adverse reaction in the financial marketplace due to a loss of investor confidence in the reliability of our consolidated financial statements, which ultimately could negatively impact the market prices of our common shares or ADSs.

Any environmental claims or failure to comply with any present or future environmental regulations, or any new environmental regulations, may require us to spend additional funds, may impose significant liability on us for present, past or future actions, and may dramatically increase the cost of providing our services to our customers.

We are subject to various laws and regulations relating to the use, storage, discharge and disposal of chemical by-products of, and water used in, our assembly and gold bumping processes. Although we have not suffered material environmental claims in the past, a failure or a claim that we have failed to comply with any present or future regulations could result in the assessment of damages or imposition of fines against us, suspension of production or a cessation of our operations or negative publicity. New regulations could require us to acquire costly equipment or to incur other significant expenses. Any failure on our part to control the use of, or adequately restrict the discharge of, hazardous substances could subject us to future liabilities that may materially reduce our earnings.

On March 4, 2016, due to the malfunction of its wastewater treatment facility, a factory of the Company located in Chupei, Taiwan was found abnormally discharging wastewater. Upon notification, the Company was able to mitigate the environmental impact by immediately ceasing the abnormal discharge and collecting the wastewater that had been discharged. The wastewater treatment facility was also immediately repaired and the factory resumed its normal operations on the next day, March 5, 2016. On April 15, 2016, the Hsinchu County Government imposed an administrative fine of approximately NT\$4 million on the Company for the violation of the statutory effluent standards and the fine was paid on April 22, 2016.

Fluctuations in exchange rates could result in foreign exchange losses.

Currently, most of our revenue is denominated in NT dollars. Our cost of revenue and operating expenses, on the other hand, are incurred in several currencies, including NT dollars, Japanese yen and US dollars. In addition, a substantial portion of our capital expenditures, primarily for the purchase of assembly and test equipment, has been, and is expected to continue to be, denominated in Japanese yen with much of the remainder in US dollars. We also have debt denominated in NT dollars, Japanese yen, and US dollars. Fluctuations in exchange rates, primarily among the US dollar, the NT dollar and the Japanese yen, will affect our costs and operating margins in NT dollar terms. In addition, these fluctuations could result in exchange losses and increased costs in NT dollar terms. Despite selective hedging and other techniques implemented by us, fluctuations in exchange rates have affected, and may continue to affect, our financial condition and results of operations.

We may not be successful in our acquisitions, investments, joint ventures and dispositions, and may therefore be unable to implement fully our business strategy.

To implement our business strategy requires us to enter into acquisition, investment, joint venture and disposition transactions. These transactions may not be successful to maintain or grow our business. On December 11, 2015, the board of directors of the Company authorized and the Company and Tsinghua Unigroup Ltd. (“Tsinghua Unigroup”) executed a share subscription agreement (the “Tsinghua Share Subscription Agreement”), to issue and sell 299,252,000 common shares of the Company, par value NT\$10 per share to Tsinghua Unigroup in a private placement (the “Private Placement”) at a price of NT\$40.0 per common share of the Company representing an aggregate purchase price of approximately NT\$12.0 billion. On November 30, 2016, the Company and Tsinghua Unigroup mutually agreed to terminate the Tsinghua Share Subscription Agreement and to form a joint-venture. Under the joint-venture, ChipMOS TECHNOLOGIES (BVI) LTD. (“ChipMOS BVI”), a wholly-owned subsidiary of the Company, would sell, for the aggregate purchase price of approximately RMB 484 million, 54.98% of the equity interests of its wholly-owned subsidiary, Unimos Shanghai, to strategic investors, including Tibet Unigroup Guowei Investment Co., Ltd. (“Unigroup Guowei”), a subsidiary of Tsinghua Unigroup, which would hold 48% equity interests of Unimos Shanghai, and the other strategic investors, including a limited partnership owned by Unimos Shanghai’s employees, would own 6.98% equity interest of Unimos Shanghai. The transaction was completed in March 2017. Unimos Shanghai is no longer the subsidiary of the Company following the completion of equity interest transfer. Please see “Item 4. Information on the Company—Agreements with Tsinghua Unigroup Ltd.” for additional information.

The success of our acquisitions, investments, joint ventures and dispositions depends on a number of factors, including:

- our ability to identify suitable investment, acquisition, joint venture or disposition opportunities;
- our ability to reach an agreement for an acquisition, investment, joint venture or disposition opportunity on terms that are satisfactory to us or at all;
- the extent to which we are able to exercise control over the acquired or joint venture company;
- our ability to align the economic, business or other strategic objectives and goals of the acquired company with those of our company; and
- our ability to successfully integrate the acquired or joint venture company or business with our company.

If we are unsuccessful in our acquisitions, investments, joint ventures and dispositions, we may not be able to implement fully our business strategy to maintain or grow our business.

We rely on key personnel, and our revenue could decrease and our costs could increase if we lose their services.

We depend on the continued service of our executive officers and skilled engineering, technical and other personnel. We will also be required to hire a substantially greater number of skilled employees in connection with our expansion plans. In particular, we depend on a number of skilled employees in connection with our LCD and other display panel driver semiconductor assembly and test services, and the competition for such employees in Taiwan is intense. We may not be able to either retain our present personnel or attract additional qualified personnel as and when needed. Moreover, we do not carry key person insurance for any of our executive officers nor do we have employment contracts with any of our executive officers or employees, and, as a result, none of our executive officers or employees is bound by any non-competition agreement. If we lose any of our key personnel, it could be very difficult to find and integrate replacement personnel, which could affect our ability to provide our services, resulting in reduced revenue and earnings. In addition, we may need to increase employee compensation levels in order to retain our existing officers and employees and to attract additional personnel. As of March 31, 2019, 21% of the workforce at our facilities are foreign workers employed by us under work permits that are subject to government regulations on renewal and other terms. Consequently, if the regulations in Taiwan relating to the employment of foreign workers were to become significantly more restrictive or if we are otherwise unable to attract or retain these workers at reasonable cost, we may be unable to maintain or increase our level of services and may suffer reduced revenue and earnings.

If our security measures are breached and unauthorized access is obtained to our information technology systems, we may lose proprietary data.

Our security measures may be breached as a result of third-party action, including computer hackers, employees error, malfeasance or otherwise, and result in unauthorized access to our customers' data or our data, including our intellectual property and other confidential business information, or our information technology systems. Because the techniques used to obtain unauthorized access, or to sabotage systems, change frequently, we may be unable to anticipate these techniques or to implement adequate preventative measures. Any security breach could result in disclosure of our trade secrets, confidential customer, supplier or employee data, which could result in legal liability, harm to our reputation and otherwise harm our business.

Risks Relating to Countries in Which We Conduct Operations

The ROC laws and regulations limit or prohibit certain technology cooperation between ROC persons or entities with PRC persons or entities, and our current technology transfer arrangements between the Company and Unimos Shanghai may be found to be in violation of any such limitation or prohibition, which may result in a fine of between NT\$50 thousand and NT\$25 million and the termination of such technology transfer arrangements and therefore have a material adverse effect on the operations of Unimos Shanghai and our financial condition and results of operations.

The ROC laws and regulations previously prohibited any transfer of semiconductor assembly and test technologies to any person or entity located in Mainland China, except for transfers involving certain low-end semiconductor assembly and test technologies, such as conventional wire bond assembly technology, if certain requirements are met. The ROC Ministry of Economic Affairs has the ultimate administrative authority in interpreting such laws and regulations. In February 2010, these restrictions have been relaxed, so that ROC entities may transfer semiconductor assembly and test technologies to any person or entity located in Mainland China after they have obtained approval from the Investment Commission of the ROC Ministry of Economic Affairs ("MOEAIC"). Under a technology transfer agreement, dated August 1, 2002, ChipMOS Bermuda, the parent company of the Company before its merger with and into the Company effective on October 31, 2016, licensed to Unimos Shanghai (formerly known as ChipMOS TECHNOLOGIES (Shanghai) LTD.) certain assembly and test-related technologies that were then controlled by ChipMOS Bermuda, which included technologies that were licensed to ChipMOS Bermuda by the Company. ChipMOS Bermuda continued to license such technologies to Unimos Shanghai pursuant to a technology transfer agreement dated October 3, 2011 with effective date of August 1, 2012. ChipMOS Bermuda also provided Unimos Shanghai with technical support and consulting services under this agreement. Following the merger of ChipMOS Bermuda and the Company which was effective on October 31, 2016 (the "Merger"), the Company is the surviving company to provide Unimos Shanghai with technical support and consulting services. On May 27, 2016, the Company and Unimos Shanghai executed another technology transfer and license agreement under which the Company licensed Unimos Shanghai certain technologies relating to LCD driver IC assembly and testing and wafer bumping. The Company and Unimos Shanghai further executed the first addendum and the second addendum to such technology transfer and license agreement on August 5, 2016 and January 19, 2017, respectively, to revise the term, and license fee and running royalty of such license arrangement.

In the opinion of Lee and Li, our ROC special counsel, since our technology transfer arrangements as described above have been approved by the MOEAIC, they are in compliance with all applicable ROC laws and regulations. However, substantial uncertainties remain regarding the interpretation and application of those laws and regulations. Accordingly, we cannot assure you that ROC regulatory authorities will not take a view contrary to the opinion of our ROC special counsel. If we were determined to be in violation of applicable ROC laws and regulations governing technology cooperation with PRC persons and entities, we may be subject to a fine of between NT\$50 thousand and NT\$25 million and may be ordered by the MOEAIC to terminate or rectify such activity within a specified period of time. Any termination of our current technology transfer to Unimos Shanghai could materially adversely affect Unimos Shanghai's operations and our financial condition, results of operations or prospects, as well as the market price of our common shares or ADSs.

Our ability to direct the operations we conduct through our affiliated companies that we do not fully own may be limited by legal duties owed to other shareholders of such companies.

Certain of our operations are conducted through companies that we do not fully own. For example, as of March 31, 2017, the Company owned 45.02% equity interests of Unimos Shanghai through its wholly-owned subsidiary ChipMOS BVI. We also conduct other activities through our affiliated entities. See also "—Risks Relating to Our Common Shares or ADSs—The Company's ability to maintain its listing and trading status of common shares on the Taiwan Stock Exchange or ADSs on the NASDAQ Stock Market is dependent on factors outside of the Company's control and satisfaction of stock exchange requirements. The Company may not be able to overcome such factors that disrupt its trading status of common shares on the Taiwan Stock Exchange or ADSs on the NASDAQ Stock Market or satisfy other eligibility requirements that may be required of it in the future" and "Item 7. Major Shareholders and Related Party Transactions—Related Party Transactions".

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In accordance with the various laws of the relevant jurisdictions in which our subsidiaries and affiliates are organized, each of our subsidiaries and affiliates and their respective directors owe various duties to their respective shareholders. As a result, the actions we wish our subsidiaries or affiliates to take could be in conflict with their or their directors' legal duties owed to their other shareholders. When those conflicts arise, our ability to cause our subsidiaries or affiliates to take the action that we desire may be limited.

Any future outbreak of health epidemics and outbreaks of contagious diseases, including avian influenza, swine flu, or Severe Acute Respiratory Syndrome, may materially affect our operations and business.

Influenza viruses circulating in animals pose threats to human health. Humans can become ill when infected with viruses from animal sources, such as avian influenza virus subtypes H5N1, H9N2 and H7N9 and swine influenza virus subtypes H1N1 and H3N2. An outbreak of a contagious disease such as New Influenza A or more commonly known as the "bird flu" and "swine flu", Severe Acute Respiratory Syndrome (SARS), or avian influenza with virus subtype H7N9, for which there is inadequate treatment or no known cure or vaccine, may potentially result in a quarantine of infected employees and related persons, and adversely affect our operations at one or more of our facilities or the operations of our customers or suppliers. We cannot predict the impact that any further future outbreak of the aforementioned influenza viruses or other diseases could have on our business and results of operations.

If any of our employees is suspected of having contracted any contagious disease, we may, under certain circumstances, be required to quarantine such employees and the affected areas of our premises. As a result, we may have to suspend part or all of our operations temporarily. In addition, any future outbreak may restrict the level of economic activity in affected regions which may also adversely affect our businesses. As a result, there is no assurance that any future outbreak of contagious diseases would not have a material adverse effect on our business, financial condition and results of operations.

We face substantial political risk associated with doing business in Taiwan, particularly due to the strained relations between the Republic of China and the People's Republic of China, which could negatively affect our business and the market price of our common shares or ADSs.

Our principal executive offices and our assembly and test facilities are located in Taiwan. As a result, our business, financial condition and results of operations and the market price of our common shares or ADSs may be affected by changes in the ROC governmental policies and the political relationship between the ROC and the PRC, as well as social instability and diplomatic and social developments in or affecting Taiwan which are beyond our control. For example, the ROC has a unique international political status. The PRC government regards Taiwan as a province and does not recognize the legitimacy of the ROC as an independent country. Although significant economic and cultural relations have been positively strengthened in recent years between the ROC and the PRC, relations have often been strained. In March 2005, the PRC government enacted the "Anti-Secession Law" codifying its policy of retaining the right to use military force to gain control over Taiwan, particularly under what it considers as highly provocative circumstances, such as a declaration of independence by Taiwan or the refusal by the ROC to accept the PRC's stated "One China" policy. Between March 18 and April 10, 2014, students and certain civic groups initiated the Sunflower Student Movement as a protest movement and occupied the Legislative Yuan and protested the passing of the Cross-Strait Service Trade Agreement ("CSSTA") proposed by the then-ruling party, the Kuomintang, at the legislature without a clause-by-clause review. The CSSTA has been put on hold ever since the Sunflower Student Movement.

In 2016, Tsai Ing-Wen of the pro-independence Democratic Progressive Party ("DPP") won Taiwan's Presidential Election and the DPP gained the majority of the seats in Taiwan's Legislative Yuan for the first time in its history. President Tsai and the DPP had stressed on how they are keen to maintain the status quo with China. In a statement issued after Tsai's win, the Chinese Cabinet's body for handling Taiwan affairs reaffirmed its opposition to Taiwan independence, but said it would work to maintain peace and stability between the two sides of the Taiwan Strait.

Past developments related to the interaction between the ROC and the PRC have on occasion depressed the market prices of the securities of Taiwanese or Taiwan-related companies, including our own. We cannot assure you any contentious situations between Taiwan and China will resolve in maintaining the current status quo or remain peaceful. Relations between the ROC and the PRC and other factors affecting military, political or economic stability in Taiwan could have a material adverse effect on our financial condition and results of operations, as well as the market price and the liquidity of our common shares or ADSs.

The business and operations of our business associates and our own business operations are vulnerable to disruptions that may be caused by natural disasters and other events.

We currently provide most of our test services through our facilities in the Hsinchu Industrial Park and the Hsinchu Science Park in Taiwan, and all of our assembly services through our facility in the Southern Taiwan Science Park. Significant damage or other impediments to these facilities as a result of natural disasters, industrial strikes or industrial accidents could significantly increase our operating costs.

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Certain regions we operate in are particularly susceptible to earthquakes and associated natural disasters. For example, on February 6, 2016, Meinong District of Kaohsiung, Taiwan registered an earthquake of 6.4 Mw (the “Meinong Earthquake”). The Meinong Earthquake claimed 117 deaths and 551 injured victims. We had a very minor impact at our manufacturing operations in the Southern Taiwan Science Park primarily due to power interruption in the immediate wake of the earthquake.

The production facilities of many of our suppliers, customers and providers of complementary semiconductor manufacturing services, including foundries, are located in Taiwan. If our customers are adversely affected by natural disasters or other events occurring in or affecting these geographic areas, it could result in a decline in the demand for our assembly and test services. If our suppliers and providers of complementary semiconductor manufacturing services are affected by such events, our production schedule could be halted or delayed. As a result, a major earthquake, other natural disaster, industrial strike, industrial accident or other disruptive event occurring in or affecting Taiwan could severely disrupt our normal operation of business and have a material adverse effect on our financial condition and results of operations.

Uncertainties about the “trade war” between the United States and Mainland China may materially and adversely affects our results of operations.

Due to the complexity of semiconductor supply chain which creates difficulty to separate the pure manufacture site of one end-product from the rest of the supply chain, any changes in U.S. trade policy could trigger retaliatory actions by affected countries, e.g., Mainland China, resulting in ‘trade wars,’ in increased costs for goods imported into the United States, which may reduce customer demand for these products if the parties having to pay those tariffs increase their prices, or in trading partners limiting their trade with the United States. If any of these consequences are realized, thus decreasing the demands from our customers or increasing the price quoted by our suppliers, such change may materially and adversely affects our results of operations.

Any future outbreak of radiation-related disease as a result of nuclear power plant reactors damage caused by the Sendai Earthquake may materially adversely affect our operations and business.

The Sendai Earthquake raises tremendous concerns about the possible effects of radiation emission from the damaged nuclear power plants. Japanese official authorities are working with experts in assessing the risk and determining the best courses of actions to implement to escape harmful radiation. The potential health effects due to exposure to harmful radiation may be temporary or permanent harmful effects in nature.

Multiple radioactive gases could possibly be emitted in a situation where uranium attains a “meltdown” state, which is a severe overheating of the core of a nuclear reactor, in which the core melts and radiation and heat are caused to escape. This would occur if the containment system partially or fully fails. The particles that are released with the gases due to the meltdown would be the spewed particles of iodine-131, strontium-90 and cesium-137. These might enter into a human by being swallowed, absorbed through the skin, or inhaled. Depending on the chemical characteristics of each of these and their predilection for certain body tissues, they could cause cancers of such organs as bones, soft tissues near bones, thyroid gland, and the bone marrow (typically known as leukemia).

Acute or very high level radiation exposure can cause a person to become very ill or to die quickly. Ionizing radiation, which is defined as high-energy particles or electromagnetic waves that can break chemical bonds, damage humans by disrupting cellular function, particularly in tissues with rapid growth and turnover of cells. Intense, high level and/or excessive radiation exposure may result in acute radiation syndrome whereby harmful effects to the human body may be evidenced by skin burns, internal organ deterioration, bleeding, vomiting, bone marrow distortion and deaths. If the radiation exposure is less intense and/or more prolonged at a lower level, then the central nervous system, kidneys, thyroid gland, and liver may be affected. Cancer is the most well-known effect, and may affect virtually any significantly exposed tissue.

Certain health effects due to exposure to harmful radiation does not have adequate treatment or known cure or vaccine, consequently, may potentially result in a quarantine of infected employees and related persons, and adversely affect our operations at one or more of our facilities or the operations of our customers or suppliers. We cannot predict the probability of any future outbreak of radiation related diseases as a possible result of nuclear power plants damage caused by the Sendai Earthquake or the extent of the material adverse impact that this could have on our business and results of operations.

Risks Relating to Our Common Shares or ADSs

The Company's ability to maintain its listing and trading status of common shares on the Taiwan Stock Exchange or ADSs on the NASDAQ Stock Market is dependent on factors outside of the Company's control and satisfaction of stock exchange requirements. The Company may not be able to overcome such factors that disrupt its trading status of common shares on the Taiwan Stock Exchange or ADSs on the NASDAQ Stock Market or satisfy other eligibility requirements that may be required of it in the future.

The Company became listed and commenced trading its common shares on the main board of Taiwan Stock Exchange ("TWSE") on April 11, 2014 and its ADSs on the NASDAQ Stock Market ("NASDAQ") on November 1, 2016. For a TWSE-listed and NASDAQ-listed company to continue trading on the main board of TWSE and NASDAQ depends in part on market conditions and other factors that may not be within the control of the Company. For these reasons there can be no assurance that the Company's shares will continue to be listed or traded on the TWSE or ADSs will continue to be listed or traded on the NASDAQ.

Volatility in the price of our common shares or ADSs may result in shareholder litigation that could in turn result in substantial costs and a diversion of our management's attention and resources.

The financial markets in the United States and other countries have experienced significant price and volume fluctuations, and market prices of technology companies have been and continue to be extremely volatile. Volatility in the price of our common shares or ADSs may be caused by factors outside of our control and may be unrelated or disproportionate to our results of operations. Shareholders of public companies such as the Company frequently institute securities class action litigations against companies following periods of volatility in the market price of a public company securities including common shares and ADSs. Litigation of this kind against the Company could result in substantial costs and a diversion of our management's attention and resources.

Certain provisions in our constitutive documents and in our severance agreements with our executive officers make the acquisition of us by another company more difficult and costly and therefore may delay, defer or prevent a change of control.

We entered into change in control severance agreements with certain management pursuant to which we agreed to pay certain severance payments if a change in control event (as defined in the change in control severance agreements) occurs and the employment of such executive officer is terminated by our company other than for cause or by such executive officer for good reasons within two years following the occurrence of the change in control event. These agreements may increase the cost of a party seeking to effect a change in control of our company.

Future sales, pledge or issuance of common shares or ADSs by us or our current shareholders could depress our share price or ADSs price and you may suffer dilution.

Sales of substantial amounts of shares or ADSs in the public market, the perception that future sales may occur, or the pledge of a substantial portion of our common shares or ADSs could depress the prevailing market price of our shares or ADSs. See "Item 7. Major Shareholders and Related Party Transactions—Major Shareholders" for further information about our major shareholders.

The Company was listed and commenced trading of common shares on the main board of TWSE on April 11, 2014. See "—Risks Relating to Our Common Shares or ADSs—The Company's ability to maintain its listing and trading status of common shares on the Taiwan Stock Exchange or ADSs on the NASDAQ Stock Market is dependent on factors outside of the Company's control and satisfaction of stock exchange requirements. The Company may not be able to overcome such factors that disrupt its trading status of common shares on the Taiwan Stock Exchange or ADSs on the NASDAQ Stock Market or satisfy other eligibility requirements that may be required of it in the future" for additional information on the Company's listing on the main board of TWSE. We plan to issue, from time to time, additional shares in connection with employee compensation and to finance possible future capital expenditures, investments or acquisitions. See "Item 6. Directors, Senior Management and Employees—Restricted Shares" for a discussion of the plan of the Restricted Shares that we have adopted for the benefit of our employees. The issuance of additional shares may have a dilutive effect on other shareholders and may cause the price of our common shares or ADSs to decrease.

On December 11, 2015, the Board of the Company authorized and the Company and Tsinghua Unigroup executed the Tsinghua Share Subscription Agreement, to sell and issue 299,252,000 shares of the Company to Tsinghua Unigroup through the Private Placement at a price of NT\$40.0 per common share representing an aggregate purchase price of approximately NT\$12.0 billion. On November 30, 2016, the Company and Tsinghua Unigroup mutually agreed to terminate the Tsinghua Share Subscription Agreement and to form a joint-venture. Under the joint-venture, ChipMOS BVI, a wholly-owned subsidiary of the Company, would sell 54.98% of the equity interests of its wholly-owned subsidiary, Unimos Shanghai, to strategic investors, including Unigroup Guowei, a subsidiary of Tsinghua Unigroup, which will hold 48% equity interests of Unimos Shanghai. The transaction was completed in March 2017 and Unimos Shanghai is no longer the subsidiary of the Company.

Holders of Our ADSs do not have the same voting rights as holders of our common shares.

Under the ROC Company Act, except under limited circumstances, shareholders have one vote for each common share held. See “Item 10. Additional Information—Voting Rights” for a discussion of voting rights of holders of our common shares. Holders of our ADSs do not have the same voting rights as holders of our common shares. Instead, the voting rights of a holder of our ADSs are governed by the Deposit Agreement and are able to exercise voting rights on an individual basis as follows: if a holder of our ADSs outstanding at the relevant record date instructs the depository to vote in a particular manner for or against a resolution, including the election of directors, the depository will cause all the shares represented by such holder’s ADSs to be voted in that manner. If the depository does not receive timely instructions from a holder of our ADSs outstanding at the relevant record date to vote in a particular manner for or against any resolution, including the election of directors, such holders of our ADSs will be deemed to have instructed the depository or its nominee to give a discretionary proxy to a person designated by the Company to vote all the shares represented by such holder’s ADSs at the discretion of such person, which may not be in the interest of holders of our ADSs.

If a non-ROC holder of our ADSs withdraws and holds our shares, such holder of our ADSs will be required to appoint a tax guarantor, local agent and custodian in the ROC and register with the TWSE in order to buy and sell securities on the TWSE.

When a non-ROC holder of our ADSs elects to withdraw and hold our shares represented by our ADSs, such holder of our ADSs will be required to appoint an agent for filing tax returns and making tax payments in the ROC. Such agent will be required to meet the qualifications set by the ROC Ministry of Finance and, upon appointment, will become the guarantor of the withdrawing holder’s tax payment obligations. Evidence of the appointment of a tax guarantor, the approval of such appointment by the ROC tax authorities and tax clearance certificates or evidentiary documents issued by such tax guarantor may be required as conditions to such holder repatriating the profits derived from the sale of our shares. We cannot assure you that a withdrawing holder will be able to appoint, and obtain approval for, a tax guarantor in a timely manner.

In addition, under the current ROC law, such withdrawing holder is required to register with the TWSE and appoint a local agent in the ROC to, among other things, open a bank account and open a securities trading account with a local securities brokerage firm, pay taxes, remit funds and exercise such holder’s rights as a shareholder. Furthermore, such withdrawing holder must appoint a local bank or local securities firm to act as custodian for confirmation and settlement of trades, safekeeping of securities and cash proceeds and reporting and declaration of information. Without satisfying these requirements, non-ROC withdrawing holders of our ADSs would not be able to hold or otherwise subsequently sell our shares on TWSE or otherwise. Appointment of an agent or a tax guarantor might also incur additional costs.

Pursuant to Mainland Investors Regulations, only qualified domestic institutional investors (the “QDIIs”, each a “QDII”) or persons that have otherwise obtained the approval from the MOEAIC and registered with the TWSE are permitted to withdraw and hold our shares from a depository receipt facility. In order to hold our shares, such QDIIs are required to appoint an agent and custodian as required by the Mainland Investors Regulations. If the aggregate amount of our shares held by any QDII or shares received by any QDII upon a single withdrawal accounts for 10.0% of our total issued and outstanding shares, such QDII must obtain the prior approval from the MOEAIC. We cannot assure you that such approval would be granted.

Restriction on the ability to deposit our shares into our ADR facility may adversely affect the liquidity and price of our ADSs.

The ability to deposit our shares into our ADR facility is restricted by the ROC law. Under the current ROC law, no person or entity, including you and the Company, may deposit our shares into our ADR facility without specific approval of the Financial Supervisory Commission of the ROC, or the FSC, unless:

- (1) the Company pays stock dividends on our shares;
- (2) the Company makes a free distribution of our shares;
- (3) holders of our ADSs exercise preemptive rights in the event of capital increases; or
- (4) to the extent permitted under the Deposit Agreement and the relevant custody agreement, investors purchase our shares, directly or through the depository, on the TWSE, and deliver our shares to the custodian for deposit into our ADR facility, or our existing shareholders deliver our shares to the custodian for deposit into our ADR facility.

With respect to item (4) above, the depository may issue our ADSs against the deposit of our shares only if the total number of our ADSs outstanding following the deposit will not exceed the number of our ADSs previously approved by the FSC, plus any our ADSs issued pursuant to the events described in items (1), (2) and (3) above.

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In addition, in the case of a deposit of our shares requested under item (4) above, the depositary will refuse to accept deposit of such our shares if such deposit is not permitted under any legal, regulatory or other restrictions notified by the Company to the depositary from time to time, which restrictions may include blackout periods during which deposits may not be made, minimum and maximum amounts and frequency of deposits.

The rights of holders of our ADSs to participate in our rights offerings is limited, which could cause dilution to your holdings.

The Company may from time to time distribute rights to its shareholders, including rights to acquire its securities. Under the Deposit Agreement, the depositary will not offer holders of our ADSs those rights unless both the distribution of the rights and the underlying securities to all our ADS holders are either registered under the Securities Act or exempt from the registration under the Securities Act. Although the Company may be eligible to take advantage of certain exemptions under the Securities Act available to certain foreign issuers for rights offering, the Company can give no assurances that it will be able to establish an exemption from registration under the Securities Act, and it is under no obligation to file a registration statement for any of these rights. Accordingly, holders of our ADSs may be unable to participate in our rights offerings and may experience dilution of their holdings.

If the depositary is unable to sell rights that are not exercised or not distributed or if the sale is not lawful or reasonably practicable, it will allow the rights to lapse, in which case holders of our ADSs will receive no value for these rights.

Changes in exchanges controls which restrict your ability to convert proceeds received from your ownership of our ADSs may have an adverse effect on the value of your investment.

Under the current ROC law, the depositary, even without obtaining approvals from the Central Bank of the Republic of China (Taiwan) or any other governmental authority or agency of the ROC, may still convert NT dollars into other currencies, including US dollars, for:

- the depositary of the sale of common shares represented by ADSs or received as stock dividends from our shares and deposited into the depositary receipt facility; and
- any cash dividends or cash distributions received.

In addition, the depositary may also convert into NT dollars incoming payments for purchase of common shares for deposit in ADR facility against the creation of additional ADSs. However, the depositary may be required to obtain foreign exchange approval from the Central Bank of the Republic of China (Taiwan) on a payment-by-payment basis for conversion from NT dollars into foreign currencies of the proceeds from the sale of subscription rights for new common shares. Although it is expected that the Central Bank of the Republic of China (Taiwan) will grant this approval as a routine manner, we cannot assure you that in the future any approval will be obtained in a timely manner, or at all.

Under the ROC Foreign Exchange Control Law, the Executive Yuan of the ROC government may, without prior notice but subject to subsequent legislative approval, impose foreign exchange controls in the event of, among other things, a material change in international economic conditions. We cannot assure you that foreign exchange controls or other restrictions will not be introduced in the future.

Item 4. Information on the Company

Overview of the Company

We are one of the leading independent providers of semiconductor assembly and test services. Specifically, we are one of the leading independent providers of testing and assembly services for LCD and other display panel driver semiconductors and advanced memory and logic/mixed-signal products in Taiwan. The depth of our engineering expertise and the breadth of our assembly and test technologies enable us to provide our customers with advanced and comprehensive assembly and test services. In addition, our geographic presence in Taiwan is attractive to customers wishing to take advantage of the logistical and cost efficiencies stemming from our close proximity to foundries and producers of consumer electronic products in Taiwan. Our production facilities are located in Hsinchu and Tainan, Taiwan.

Our Structure and History

We are a company limited by shares, incorporated on July 28, 1997, under the ROC Company Act, under the name “ChipMOS TECHNOLOGIES INC.” (“ChipMOS Taiwan”), as a joint venture company between Mosel Vitelic Inc. (“Mosel”) and Siliconware Precision Industries Co., Ltd. (“Siliconware Precision”) and with the participation of other investors. Our operations consist of the assembly and test of semiconductors as well as gold bumping and memory module manufacturing. Our principal place of business is located at No. 1, R&D Road 1, Hsinchu Science Park, Hsinchu, Taiwan, ROC and its phone number is (886) 3 577 0055 and our Internet website address is “<https://www.chipmos.com>.”

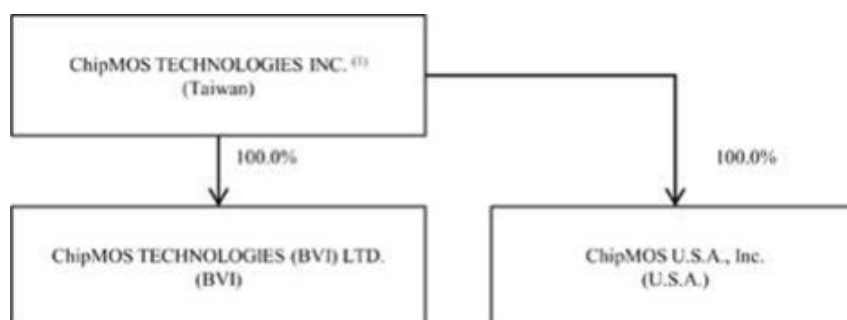
In January 2001, ChipMOS Bermuda acquired an equity interest in the Company issuing its shares to the Company’s shareholders in exchange for their 70.3% shareholding in the Company. In October 2001, the Company issued 6,911,732 common shares as employee bonuses. In December 2002, ChipMOS Bermuda issued 132,793 shares in exchange for 5,633,442 shares of the Company held by these employees. On September 14, 2007, the Company completed a share exchange transaction with ChipMOS Bermuda pursuant to which ChipMOS Bermuda exchanged one common share for every 8.4 common shares of the Company. Following the completion of the share exchange transaction, the Company became ChipMOS Bermuda’s wholly-owned subsidiary. In February 2010, ChipMOS Bermuda agreed to sell 15.8% of the Company’s outstanding shares to Siliconware Precision. The share purchase transaction was completed in January 2011.

As part of the Company’s listing plan on the TWSE, on April 16, 2013, ChipMOS Bermuda completed the sale of 6.5 million common shares of the Company, at the price of NT\$15.0 per share to the Company’s underwriters and certain others, including non-US employees of the Company. From September 2, 2013 to October 3, 2013, ChipMOS Bermuda sold 180 million common shares of the Company, at the price of NT\$20.0 per shares to investors. The Company became listed and commenced trading on the main board of TWSE on April 11, 2014.

According to the merger agreement, entered between the Company and ChipMOS Bermuda dated January 21, 2016 (the “Merger Agreement”), ChipMOS Bermuda merged with and into the Company, with the Company being the surviving company after the Merger. The transaction was accounted as capital reorganization within the Company and its subsidiaries (the “Group”), please see “Item 5. Operating and Financial Review and Prospects—Recent Acquisitions”. Any common shares of ChipMOS Bermuda issued and outstanding immediately prior to the effective time of the Merger was cancelled and, in exchange, each former holder of such cancelled common shares of ChipMOS Bermuda was entitled to receive, with respect to each such share (i) US\$3.71 in cash, without interest, and (ii) 0.9355 ADSs representing 18.71 shares of the Company (each ADS representing 20 new common shares, par value of NT\$10 each, to be issued by the Company) in exchange for each of ChipMOS Bermuda’s common share held (the US\$3.71 in cash and together with the ADSs, the “Merger Consideration”). The Merger was completed and effective on October 31, 2016. The Company issued 512,405,340 common shares represented by the ADSs and the ADSs were listed on the NASDAQ on November 1, 2016.

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The following chart illustrates our corporate structure and our equity interest in each of our principal subsidiaries as of the date of this Annual Report on Form 20-F.



Note:

(1) Under IFRS 10 “Consolidated Financial Statements”, we are required to consolidate the financial results of any subsidiaries in which we hold a controlling interest or voting interest in excess of 50% or we have the power to direct or cause the direction of the management and policies, notwithstanding the lack of majority ownership. In 2014, we consolidated the financial results of ChipMOS U.S.A., Inc., or ChipMOS USA, and ChipMOS BVI. We also consolidated Unimos Shanghai, ChipMOS BVI’s previously wholly-owned subsidiary prior to ChipMOS BVI’s sale of its 54.98% equity interests in Unimos Shanghai in March 2017.

Agreements with Tsinghua Unigroup Ltd.

On December 11, 2015, the board of the Company authorized and the Company signed the Tsinghua Share Subscription Agreement, which is included as Exhibit 4.3, to sell the Company’s 299,252,000 shares to Tsinghua Unigroup through a private placement at a price of NT\$40.0 per common share of the Company representing an aggregate purchase price of approximately NT\$12.0 billion.

On December 11, 2015, the Company and Tsinghua Unigroup also executed the Strategic Alliance Agreement, which is included as Exhibit 4.4, designed to strengthen the long-term cooperation relationship between the two companies. Under the terms of the Strategic Alliance Agreement, Tsinghua Unigroup would assist the Company in expanding and strengthening the relationship between the Company and companies relating to the assembly and test services of LCD drivers and wafer bumping services in the PRC, and would introduce other potential suppliers, customers and business partners in the PRC to the Company.

On February 25, 2016, the Company and Tsinghua Unigroup executed the Subscriber Joinder Agreement, which is included as Exhibit 4.6, under which Tsinghua Unigroup assigned its obligations and liabilities under the Tsinghua Share Subscription Agreement to Tibet MaoYeChaungXin INVESTMENT CO., LIMITED (“Tibet MaoYe”), which is a subsidiary controlled by Tsinghua Unigroup. From the execution of the Subscriber Joinder Agreement, Tibet MaoYe became the “Subscriber” defined in the Tsinghua Share Subscription Agreement and assumed all the rights, benefits, liabilities and obligations incurred from the Tsinghua Share Subscription Agreement. On the same date, the Company and Tibet MaoYe executed the Tibet MaoYe Share Subscription Agreement (included as Exhibit 4.7), the substantive content of which is consistent with the Tsinghua Share Subscription Agreement.

On November 30, 2016, the Company and Tsinghua Unigroup mutually agreed to terminate the Tsinghua Share Subscription Agreement and to form a joint-venture. Under the joint-venture, the Equity Interest Transfer Agreements among ChipMOS BVI, a wholly-owned subsidiary of the Company, and some strategic investors which including Unigroup Guowei, a subsidiary of Tsinghua Unigroup, were executed. Pursuant to the Equity Interest Transfer Agreements, ChipMOS BVI would sell 54.98% equity interests of its wholly-owned subsidiary, Unimos Shanghai, to the strategic investors, and Unigroup Guowei would hold 48% equity interests of Unimos Shanghai, and the other strategic investors, including a limited partnership owned by Unimos Shanghai’s employees, would own approximately 6.98% equity interest of Unimos Shanghai. The transaction was completed in March 2017. Unimos Shanghai is no longer the subsidiary of the Company following the completion of equity interests transfer. Also pursuant to the agreement, ChipMOS BVI and the strategic investors agreed to further invest RMB 1,074 million into Unimos Shanghai. The further investment was completed in two tranches, one in July 2017 at RMB 687 million and one in February 2018 at RMB 387 million.

Our Principal Consolidated Subsidiaries

Below is a description of our principal consolidated subsidiaries:

ChipMOS TECHNOLOGIES (BVI) LTD., or formerly known as MODERN MIND TECHNOLOGY LIMITED and Unimos Microelectronics (Shanghai) Co., Ltd. or formerly known as ChipMOS TECHNOLOGIES (Shanghai) LTD. ChipMOS BVI was incorporated in the British Virgin Islands in January 2002. Before the transfer of 54.98% equity interests of Unimos Shanghai which was completed in March 2017, ChipMOS BVI conducted its operations through Unimos Shanghai, a wholly-owned subsidiary incorporated in Mainland China. See “—Our Structure and History—Agreements with Tsinghua Unigroup Ltd.” for more details. Unimos Shanghai is engaged in wafer testing and semiconductor assembly and test.

On November 30, 2016, ChipMOS BVI entered into the Equity Interest Transfer Agreements with Unigroup Guowei and other strategic investors. Under the agreements, ChipMOS BVI would sell 54.98% of the equity interests of Unimos Shanghai, to the strategic investors. Following the transaction which was completed in March 2017, Unigroup Guowei holds 48% equity interests of Unimos Shanghai, the other strategic investors, including a limited partnership owned by Unimos Shanghai’s employees, own approximately 6.98% equity interest of Unimos Shanghai, and ChipMOS BVI holds 45.02% equity interests of Unimos Shanghai. Unimos Shanghai is no longer the subsidiary of the Company. ChipMOS BVI and the strategic investors agreed to further invest RMB 1,074 million into Unimos Shanghai. The further investment was completed in two tranches, one in July 2017 at RMB 687 million and one in February 2018 at RMB 387 million. In July 2018 ChipMOS TECHNOLOGIES (Shanghai) LTD. was renamed Unimos Microelectronics (Shanghai) Co., Ltd.

ChipMOS U.S.A., Inc. ChipMOS USA was incorporated in the United States of America in October 1999. It primarily engaged in providing research and development, and marketing of semiconductors, circuits, electronic related products, for its parent company and affiliates, throughout the United States of America. ChipMOS USA began generating revenue in 2001. As of December 31, 2018, ChipMOS Taiwan owned 100% of the outstanding shares of ChipMOS USA.

Industry Background

We provide a broad range of back-end assembly and test services. Test services include engineering test, wafer probing and final test of memory and logic/mixed-signal semiconductors. We also offer a broad selection of leadframe- and organic substrate-based package assembly services for memory and logic/mixed-signal semiconductors. Our advanced leadframe-based packages include thin small outline packages, or TSOPs, and our advanced organic substrate-based packages include fine-pitch ball grid array packages (“fine-pitch BGA”). In addition, we provide gold bumping, reel to reel assembly and test services for LCD and other display panel driver semiconductors by employing TCP, COF and COG technologies.

Semiconductors tested and assembled by us are used in personal computers, graphics applications such as game consoles communications equipment mobile products such as cellular handsets, tablets, consumer electronic products automotive/industry and display applications such as display panels. In 2018, 25.9% of our revenue was derived from testing services for memory and logic/mixed-signal semiconductors, 25.3% from assembly services for memory and logic/mixed-signal semiconductors, 30.8% from LCD and other display panel driver semiconductor assembly and test services and 18.0% from bumping services for semiconductors, respectively.

Semiconductor Industry Trends

Growth in the semiconductor industry is largely driven by end-user demand for consumer electronics, communications equipment and computers, for which semiconductors are critical components. The worldwide semiconductor industry has experienced peaks and troughs over the last decade, with a severe downturn at the second half of 2018. Beginning in the fourth quarter of 2018, the semiconductor industry commenced another downturn that increased in unprecedented severity into the first half of 2019. The overall semiconductor industry commenced to recover from the downturn in the second quarter of 2019.

Selected Key Semiconductor Markets

While a recovery trend in end-user demand for new and improved electronic products and applications continues, various sectors of the semiconductor industry are in turn expected to benefit from a resumption in growth. These sectors include the memory semiconductor market for industrial, mobile and automotive applications, and the LCD and other display panel driver semiconductor market.

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Memory Semiconductor Market

The potential for memory market growth is linked to anticipated memory content increases in consumer electronics, industrial, and PC applications (after such time as a recovery occurs in end-user demand for these) due to increasing operating system requirements, increasing use of graphics in gaming and other applications, continued growth of broadband content and a transition to 64-bit PC architecture. The memory market is dominated by two segments- DRAM and flash memory. Potential growth in the DRAM market is expected to be driven by continued growth in both the commodity and niche DRAM market, as well as growth opportunities in mobile DRAM as memory requirements significantly increase for mobile applications. Flash memory market potential growth is expected to be driven by increasing memory requirements for cellular handsets, digital cameras, digital audio/video, server and other mobile applications, and new application demand of NOR flash for automotive/industry, OLED panel and touch with display driver integration (TDDI).

LCD and Other Display panel Driver Semiconductor Market

Display panels are used in applications such as PC monitors, notebook computers, tables, television sets, cellular handsets and digital cameras. The end-user demand for LCD and other display panel driver semiconductors experienced a downturn in 2007 and 2008. The LCD driver market started to recover in the second quarter of 2009. During second half of 2015, we were experiencing inventory corrections of certain market segments. With the increasing penetration rate of UHD TVs, 4K TVs has stable strong demand and with 8K emerging, which demands more COF quantities pre TV and leads to high utilization level of COF assembly since the second half of 2017 and up to date. Regarding to the small panel application, an integrated driver IC solution, TDDI, is emerging using in smart phone since second half of 2018. There are more than 30% driver ICs of smart phone are used TDDI solution in 2018. Meanwhile, there are around 21% of TDDI is packaged to COF format in Q4 2018, which driven by narrow bezel screen panel requirement of new smart phone. The TDDI demand still keep very strong in Q1 2019 and COF format TDDI grows to around 25% in Q1 2019.

Logic/Mixed-Signal Semiconductor Market

The communications market is one of the main drivers of potential growth in the semiconductor industry. Logic/mixed-signal semiconductors, which are chips with analog functionality covering more than half of the chip area, are largely used in the communications market. The increasing use of digital technology in communications equipment requires chips with both digital and analog functionality for applications such as modems, network routers, switches, cable set-top boxes and cellular handsets. As the size and cost of cellular handsets and other communications-related devices have decreased, components have increased in complexity. Logic/mixed-signal semiconductors, such as LCD controller, power devices, fingerprint sensors and MEMS products, TV scaler and DVD controllers, are also used in consumer electronic products.

Overview of the Semiconductor Manufacturing Process

The manufacturing of semiconductors is a complex process that requires increasingly sophisticated engineering and manufacturing expertise. The manufacturing process may be broadly divided into the following stages:



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Process	Description
Circuit Design	The design of a semiconductor is developed by laying out circuit patterns and interconnections.
Wafer Fabrication	Wafer fabrication begins with the generation of a photomask, a photographic negative onto which a circuit design pattern is etched or transferred by an electron beam or laser beam writer. Each completed wafer contains many fabricated chips, each known as a die.
Wafer Probe	Each individual die is then electrically tested, or probed, for defects. Dies that fail this test are discarded, or, in some cases, salvaged using laser repair.
Assembly	The assembly of semiconductors serves to protect the die, facilitates its integration into electronic systems and enables the dissipation of heat. The process begins with the dicing of the wafers into chips. Each die is affixed to a leadframe-based or organic substrate-based substrate. Then, electrical connections are formed, in many cases by connecting the terminals on the die to the inner leads of the package using fine metal wires. Finally, each chip is encapsulated for protection, usually in a molded epoxy enclosure.
Final Test	Assembled semiconductors are tested to ensure that the device meets performance specifications. Testing takes place on specialized equipment using software customized for each application. For memory semiconductors, this process also includes “burn-in” testing to screen out defective devices by applying very high temperatures and voltages onto the memory device.

Outsourcing Trends in Semiconductor Manufacturing

Historically, integrated device manufacturers (“IDMs”), designed, manufactured, tested and assembled semiconductors primarily at their own facilities. In recent years, there has been a trend in the industry to outsource various segments of stages in the manufacturing process to reduce the high fixed costs resulting from the increasingly complex manufacturing process. Virtually every significant stage of the manufacturing process can be outsourced. The independent semiconductor manufacturing services market currently consists of wafer fabrication and probing services and semiconductor assembly and test services. Most of the world’s major IDMs now use some independent semiconductor manufacturing services to maintain a strategic mix of internal and external manufacturing capacity. Many of these IDMs are continuously significantly reducing their investments in new semiconductor assembly and test facilities.

The availability of technologically advanced independent semiconductor manufacturing services has also enabled the growth of “fabless” semiconductor companies that focus exclusively on semiconductor design and marketing and outsource their fabrication, assembly and test requirements to independent companies.

We believe the outsourcing of semiconductor manufacturing services, and in particular of assembly and test services, will increase for many reasons, including the following:

Significant Capital Expenditure Requirements. Driven by increasingly sophisticated technological requirements, wafer fabrication, assembly and test processes have become highly complex, requiring substantial investment in specialized equipment and facilities and sophisticated engineering and manufacturing expertise. In addition, product life cycles have been shortened magnifying the need to continuously upgrade or replace manufacturing, assembly and test equipment to accommodate new products. As a result, new investments in in-house fabrication, assembly and test facilities are becoming less desirable for IDMs because of the high investment costs, as well as difficulties in achieving sufficient economies of scale and utilization rates to be competitive with the independent service providers. On the contrary, independent foundry, assembly and test companies are able to realize the benefits of specialization and achieve economies of scale by providing services to a large customer base across a wide range of products. This enables them to reduce costs and shorten production cycles through high capacity utilization and process expertise.

Increasing Focus on Core Competencies. As the costs of semiconductor manufacturing facilities increase, semiconductor companies are expected to further outsource their wafer fabrication, assembly and test requirements to focus their resources on core competencies, such as semiconductor design and marketing.

Time-to-Market Pressure. Increasingly short product life cycles have amplified time-to-market pressure for semiconductor companies, leading them to rely increasingly on independent companies as a key source for effective wafer fabrication, assembly and test services.

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Semiconductor Assembly and Test Services Industry

Growth in the semiconductor assembly and test services industry is driven by increased outsourcing of the various stages of the semiconductor manufacturing process by IDMs and fabless semiconductor companies.

The Semiconductor Industry and Conditions of Outsourcing in Taiwan and Mainland China

Taiwan is one of the world's leading locations for outsourced semiconductor manufacturing. The semiconductor industry supply chain in Taiwan has developed such that the various stages of the semiconductor manufacturing process have been disaggregated, thus allowing for specialization. The disaggregation of the semiconductor manufacturing process in Taiwan permits these semiconductor manufacturing service providers to focus on particular parts of the production process, develop economies of scale, maintain higher capacity utilization rates and remain flexible in responding to customer needs by lowering time-to-market pressure faced by semiconductor companies. There are several leading service providers in Taiwan, each of which offers substantial capacity, high-quality manufacturing, leading semiconductor wafer fabrication, test, assembly and process technologies, and a full range of services. These service providers have access to an educated labor pool and a large number of engineers suitable for sophisticated manufacturing industries. As a result, many of the world's leading semiconductor companies outsource some or all of their semiconductor manufacturing needs to Taiwan's semiconductor manufacturing service providers and take advantage of the close proximity among facilities in the supply chain. In addition, companies located in Taiwan are very active in the design and manufacture of electronic systems, which has created significant local demand for semiconductor devices.

A few years ago, Mainland China had emerged as an attractive location for outsourced semiconductor manufacturing based on the fact. Companies could take advantage of strongly supports by Mainland China government to accelerate the development of the semiconductor industry and a large domestic market. These factors had driven increased relocation of much of the electronics industry manufacturing and supply chain to Mainland China. But according to the economics uncertainty caused by the trade tensions in 2018, the related investment in China risk is increasing. An increasing number of global electronic systems manufacturers and contract manufacturers are relocating or have relocated production facilities from Mainland China.

Our Strategy

Our goal is to reinforce our position as a leading independent provider of semiconductor assembly and test services, concentrating principally on memory, logic/mixed-signal and LCD and other display panel driver semiconductors. The principal components of our business strategy are set forth below.

Focus on Providing Our Services to Potential Growth Segments of the Semiconductor Industry.

We intend to continue our focus on developing and providing advanced assembly and test services for potential growth segments of the semiconductor industry, such as memory, logic/mixed-signal, MEMS, LCD and other display panel driver semiconductors and bumping services. We believe that our investments in equipment and research and development in some of these areas allow us to offer a service differentiated from that of our competition. In order to benefit from the expected resumption of growth in these segments, we intend to continue to invest in capacity to meet the assembly and test requirements of these key semiconductor market segments.

Continue to Invest in the Research and Development of Advanced Assembly and Test Technologies.

Critical to our business growth is the continuation to expand our capabilities in testing and assembly and integrate wafer bumping and assembly core technologies to provide turn-key total solution service to our customers. We typically focus on advanced technologies that consist of greater potentials to generate higher margins. For example, we conducted new product introductions and on an on-going basis continue to expand our capabilities in fine-pitch wafer bumping, multi-chip package ("MCP"), flip chip package, and high speed assembly and test of fine-pitch TDDI & 12" COFs. We have also introduced low cost metal composite bump ("MCB") products based on our proprietary Cu plating technology to service display panel market and expand offerings to other business regions. We continue to maintain close working relationships with local and overseas research institutions and universities to keep abreast with leading edge technologies and broaden the scope of applications.

In 2019, we expect to focus our research and development efforts in the following areas:

- development of advanced assembly technologies in WLCSP, MEMS, finger print sensors, and flip chip products for memory devices and mixed-signal products;
- expand fine-pitch Au and Cu bumping technology for 300mm wafers;
- expand fine-pitch test capabilities for advanced Display Panel drivers for example, OLED & TDDI products;

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- carry out in-process improvement to improve manufacturing yields and shorten turnaround time;
- develop new software conversion programs to increase the capabilities of our testers; and
- continue to focus on delivering environmentally friendly assembly services by eliminating lead and halogen elements from the materials.

In 2018, we spent approximately 5.1% of our revenue on research and development. We will continue to invest our resources to recruit and retain experienced research and development personnel. As of March 31, 2019, our research and development team comprised 659 persons.

Build on Our Strong Presence in Taiwan and Strong Industrial Position Outside Taiwan.

We intend to build on our strong presence in key centers of semiconductor and electronics manufacturing to grow our business. Currently, most of our operations are in Taiwan, one of the world's leading locations for outsourced semiconductor manufacturing. This presence provides us with several advantages. Firstly, our proximity to other semiconductor companies is attractive to customers who wish to outsource various stages of the semiconductor manufacturing process. Secondly, our proximity to many of our suppliers, customers and the end-users of our customers' products enables us to be involved in the early stages of the semiconductor design process, enhances our ability to quickly respond to our customers' changing requirements and shortens our customers' time-to-market. Thirdly, we have access to an educated labor pool and a large number of engineers who are able to work closely with our customers and other providers of semiconductor manufacturing services.

We believe that we are strategically positioned to capture the growth opportunities of the semiconductor market in Mainland China by joint venture with Tsinghua Unigroup to Unimos Shanghai.

Depending on customer's demands, market conditions and other relevant considerations, we may from time to time look into other opportunities to expand our operations outside of Taiwan.

Expand Our Offering of Vertically Integrated Services.

We believe that one of our competitive strengths is our ability to provide vertically integrated services to our customers. Vertically integrated services consist of the integrated testing, assembly and direct shipment of semiconductors to end-users designated by our customers. Providing vertically integrated services enables us to shorten lead times for our customers. As time-to-market and cost increasingly become sources of competitive advantage for our customers, they increasingly value our ability to provide them with comprehensive back-end services.

We are able to offer vertically integrated services for a broad range of products, including memory, logic/mixed-signal and LCD and other display panel driver semiconductors. These services offerings include complementary technologies, products and services as well as additional capacity. We believe that these will continue to enhance our own development and expansion efforts into new and potential growth markets. We intend to establish new alliances with leading companies and, if suitable opportunities arise, engage in merger and acquisition activities that will further expand the services we can provide.

Focus on Increasing Sales through Long-Term Agreements with Key Customers as well as Business with Smaller Customers.

From time to time, we strategically agree to commit a portion of our assembly and test capacity to certain of our customers. We intend to continue focus on increasing sales to key customers through long-term capacity agreements. The customers with which we entered long-term agreements include a reputable memory customer based in the US. See "—Customers" below for a more detailed discussion of these long-term agreements.

Global market and economic conditions have been unprecedented and challenging with tight credit conditions and recession in most major economies since 2008. In 2018, we seek a long term capacity secure agreement with our customer for wafer test and 12" COF assembly of LCD and other display panel driver to reduce our investment risk. we also resumed our focus on our business with smaller customers or customers who do not place orders on a regular basis We believe that the dual focused strategy will assist us to be better prepared for the current economic volatility and ensure maximum utilization rate of our capacity and help us to develop closer relationships with all types of our customers.

Principal Products and Services

The following table presents, for the periods shown, revenue by service segment as a percentage of our revenue.

	Year ended December 31,		
	2016	2017	2018
Testing	25.0%	26.9%	25.9%
Assembly	31.9	29.4	25.3
LCD and other display panel driver semiconductor testing and assembly revenue	26.8	26.7	30.8
Bumping	16.3	17.0	18.0
Total revenue	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

Memory and Logic/Mixed-Signal Semiconductors

Testing

We provide testing services for memory and logic/mixed-signal semiconductors:

Memory. We provide testing services for a variety of memory semiconductors, such as SRAM, DRAM and Flash memory. To speed up the time-consuming process of memory product testing, we provide parallel test, which includes to complete wafer test in one touchdown (up to 1,000 plus devices simultaneously). The memory semiconductors we test are used primarily in desktop computers, laptop, tablet computers, handheld consumer electronic, devices and wireless communication devices.

Logic/Mixed-Signal. We conduct tests on a wide variety of logic/mixed-signal semiconductors, with lead counts ranging from the single digits to over 1024 and data rate of up to 9GHz. The semiconductors we test include audio/video codec, networking/communications, MCU, LCD related, and MEMS used for home entertainment/media center, personal computer applications, network/communication and mobile smart devices. We also test a variety of application specific integrated circuits (“ASICs”), for applications such as FHD/UHD LCD TV, Tablet PC, etc.

The following is a description of our pre-assembly testing services:

Engineering Testing. We provide engineering testing services, including software program development, electrical design validation, reliability and failure analysis.

- *Software Program Development* Design and test engineers develop a customized software program and related hardware to test semiconductors on advanced test equipment. A customized software program is required to test the conformity of each particular semiconductor to its particular function and specification.
- *Electrical Design Validation.* A prototype of the designed semiconductor is submitted to electrical tests using advanced test equipment, customized software programs and related hardware. These tests assess whether the test result of the prototype semiconductor complies with the designed requirements using a variety of different operating specifications, including functionality, frequency, voltage, current, timing and temperature range.
- *Reliability Analysis.* Reliability analysis is designed to assess the long-term reliability of the semiconductor and its suitability of use for its intended applications. Reliability testing may include operating-life evaluation, during which the semiconductor is subjected to high temperature and voltage tests.
- *Failure Analysis.* If the prototype semiconductor does not perform to specifications during either the electrical validation or reliability analysis process, failure analysis is performed to determine the reasons for the failure. As part of this analysis, the prototype semiconductor may be subjected to a variety of tests, including electron beam probing and electrical testing.

Wafer Probing. Wafer probing is the process stage immediately before the assembly of semiconductors and involves visual inspection and the electrical testing of the processed wafer to ensure that it meets our customers’ specifications. Wafer probing employs sophisticated design and manufacturing technologies to connect the terminals of each chip for testing. Defective chips are marked on the surface or memorized in an electronic file, known as a mapping file, to facilitate subsequent process.

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Laser Repairing. This is a unique process in testing operation for special SOC memory products. In laser repairing, specific poly or metal fuses are blown after wafer probing to enable a spare row or column of a memory unit in SOC to replace a defective memory cell.

After assembly, we perform the following testing services:

Burn-In Testing. This process screens out unreliable products using high temperature, high voltage and prolonged stresses environment to ensure that finished products will survive a long period of end-user service. This process is used only for memory products. This process needs customized Burn-In board.

Top Marking . By using laser marker, the marking content were according to our customers' specification, including the logo, part number, date code and lot number.

Final Testing. Assembled semiconductors are tested to ensure that the devices meet performance specifications. Tests are conducted using specialized equipment with software customized for each application in different temperature conditions ranging from -45 degrees Celsius to 125 degrees Celsius.

Final Inspection and Packing. Final inspection involves visual or auto-inspection of the devices to check any bent leads, ball damage, inaccurate markings or other package defects. Packing involves dry packing, package-in-tray, package-in-tube and tape and reel. According to package level, Dry packing involves heating semiconductors in a tray at 125 degrees Celsius for about four to six hours to remove the moisture before the semiconductors are vacuum-sealed in an aluminum bag. Package-in-tube involves packing the semiconductors in anti-static tubes for shipment. Tape and reel pack involves transferring semiconductors from a tray or tube onto an anti-static embossed tape and rolling the tape onto a reel for shipment to customers.

Assembly

Our assembly services generally involve the following steps:

<i>Wafer Lapping</i>	The wafers are ground to their required thickness.
<i>Die Saw</i>	Wafers are cut into individual dies, or chips, in preparation for the die-attach process.
<i>Die Attach</i>	Each individual die is attached to the leadframe or organic substrate.
<i>Wire Bonding</i>	Using gold or silver wires, to connect the I/O pads on the die to the inner lead of leadframe or substrate.
<i>Flip Chip Bonding</i>	Using solder bumps or Cu pillar bumps on die, to connect the leadframe or substrate pad via soldering reflow.
<i>Molding</i>	The die and wires are encapsulated to provide physical support and protection.
<i>Marking</i>	Each individual package is marked to provide product identification.
<i>Dejunking and Trimming</i>	Mold flash is removed from between the lead shoulders through dejunking, and the dambar is cut during the trimming process.
<i>Electrical Plating</i>	A solderable coating is added to the package leads to prevent oxidization and to keep solder wettability of the package leads.
<i>Ball Mount and Reflow</i>	Each electrode pad of the substrate is first printed with flux, after which solder balls are mounted, heated and attached to the electrode pad of the substrate through a reflow oven.
<i>Forming/Singulation</i>	Forming involves the proper configuration of the device packages leads, and singulation separates the packages from each other.

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We offer a broad range of package formats designed to provide our customers with a broad array of assembly services. The assembly services we offer customers are leadframe-based packages, which include thin small outline packages, and organic substrate-based packages, including fine-pitch BGA.

The differentiating characteristics of these packages include:

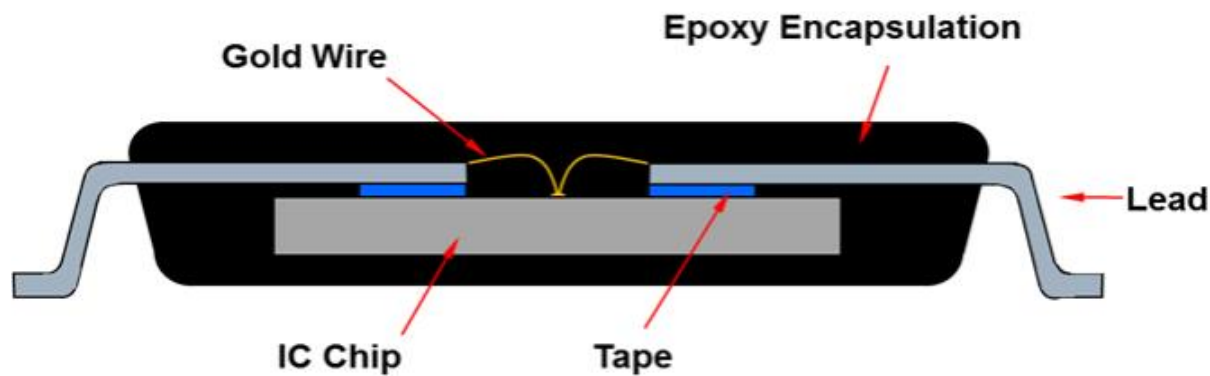
- the size of the package;
- the number of electrical connections which the package can support;
- the electrical performance and requirements of the package; and
- the heat dissipation requirements of the package.

As new applications for semiconductor devices require smaller components, the size of packages has also decreased. In leading-edge packages, the size of the package is reduced to just slightly larger than the size of the individual chip itself in a process known as chip scale packaging.

As semiconductor devices increase in complexity, the number of electrical connections required also increases. Leadframe-based products have electrical connections from the semiconductor device to the electronic product through leads on the perimeter of the package. Organic substrate-based products have solder balls on the bottom of the package, which create the electrical connections with the product and can support large numbers of electrical connections.

Leadframe-Based Packages. These are generally considered the most widely used package category. Each package consists of a semiconductor chip encapsulated in a plastic molding compound with metal leads on the perimeter. This design has evolved from a design plugging the leads into holes on the circuit board to a design soldering the leads to the surface of the circuit board.

The following diagram presents the basic components of a standard leadframe-based package for memory semiconductors:



To address the market for miniaturization of portable electronic products, we are currently developing and will continue to develop increasingly smaller versions of leadframe-based packages to keep pace with continually shrinking semiconductor device sizes. Our advanced leadframe-based packages generally are thinner and smaller, have more leads and have advanced thermal and electrical characteristics when compared to traditional packages. As a result of our continual product development, we offer leadframe-based packages with a wide range of lead counts and sizes to satisfy our customers' requirements.

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The following table presents our principal leadframe-based packages, including the number of leads in each package, commonly known as lead-count, a description of each package and the end-user applications of each package.

<u>Package</u>	<u>Lead-count</u>	<u>Description</u>	<u>End-User Applications</u>
Plastic Leaded Chip Carrier (PLCC)	32-44	Package with leads on four sides used in consumer electronics products in which the size of the package is not vital	Copiers, printers, scanners, personal computers, electronic games, monitors
Plastic Dual-in-line Package (PDIP)	16-56	Package with insertion leads on longer sides used in consumer electronics products	Electronic games, monitors, copiers, printers, audio and video products, personal computers
Thin Small Outline Package I (TSOP I)	28-56	Designed for high volume production of low lead-count memory devices, including flash memory, SRAM and MROM	Notebook computers, personal computers, still and video cameras and standard connections for peripherals for computers
Thin Small Outline Package II (TSOP II)	24-86	Designed for memory devices, including flash memory, SRAM, SDRAM and DDR DRAM	Disk drives, recordable optical disk drives, audio and video products, consumer electronics, communication products
Quad Flat Package (QFP)	44-208	Flat structure with 4-sided peripheral leads designed for SRAM, graphic processors, personal computer chipsets and mixed-signal devices	Wireless communication products, notebook computers, personal computers, consumer electronics
Quad Flat No Lead (QFN)	8-132	Thermal enhanced quad flat no lead package providing small footprint (chip scale), light weight with good thermal and electrical performance	Wireless communication products, notebook computers, PDAs, consumer electronics
Low-Profile Quad Flat Package (LQFP)	48-128	Low-profile and light weight package designed for ASICs, digital signal processors, microprocessors/ controllers, graphics processors, gate arrays, SSRAM, SDRAM, personal computer chipsets and mixed-signal devices	Wireless communication products, notebook computers, digital cameras, cordless/radio frequency devices
Thin Quad Flat Package (TQFP)	44-128	Designed for lightweight portable electronics requiring broad performance characteristics and mixed-signal devices	Notebook computers, personal computers, disk drives, office equipment, audio and video products and wireless communication products
Small Outline Package (SOP)	8	Designed for low lead-count memory and logic semiconductors, including SRAM and micro-controller units	Personal computers, consumer electronics, audio and video products, communication products
Multi-Chip Package (TSOP with organic substrate)	24-86	Our patented design for memory devices, including SRAM, DRAM and SDRAM	Notebook computers, personal computers, disk drives, audio and video products, consumer products, communication products
Flip Chip Quad Flat No Lead (FCQFN)	6-24	Thermal enhanced quad flat no lead package providing small footprint (chip scale), light weight with good thermal and electrical performance Flip chip process is designed for better electrical performance compared to wire bonding process	Wireless communication products, notebook computers, PDAs, consumer electronics

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Organic Substrate-based Packages. As the number of leads surrounding a traditional leadframe-based package increases, the leads must be placed closer together to reduce the size of the package. The close proximity of one lead to another can create electrical shorting problems and requires the development of increasingly sophisticated and expensive techniques to accommodate the high number of leads on the circuit boards.

The BGA format solves this problem by effectively creating external terminals on the bottom of the package in the form of small bumps or balls. These balls are evenly distributed across the entire bottom surface of the package, allowing greater pitch between the individual terminals. The ball grid array configuration enables high-pin count devices to be manufactured less expensively with less delicate handling at installation.

Our organic substrate-based packages employ a fine-pitch BGA design, which uses a plastic or tape laminate rather than a leadframe and places the electrical connections, or leads, on the bottom of the package rather than around the perimeter. The fine-pitch BGA format was developed to address the need for the smaller footprints required by advanced memory devices. Benefits of ball grid array assembly over leadframe-based assembly include:

- smaller size;
- smaller footprint on a printed circuit board;
- better electrical signal integrity; and
- easier attachment to a printed circuit board.

The following diagram presents the basic component parts of a fine-pitch BGA package:

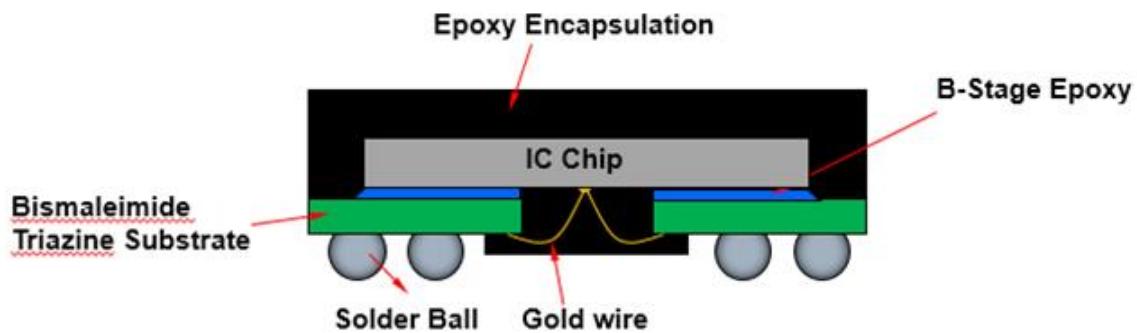


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The following table presents the ball-count, description and end-user applications of organic substrate-based packages we currently assemble:

<u>Package</u>	<u>Connections</u>	<u>Description</u>	<u>End-User Applications</u>
Mini BGA	24-400	Low-cost and space-saving assembly designed for low input/output count, suitable for semiconductors that require a smaller package size than standard BGA	Memory, analog, flash memory, ASICs, radio frequency devices, personal digital assistants, cellular handsets, communication products, notebook computers, wireless systems
Fine-Pitch BGA	54-126	Our patented design for DRAM products that require high performance and chip scale package (CSP)	Notebook computers, cellular handsets, global positioning systems, personal digital assistants, wireless systems
Very Thin Fine-Pitch BGA	48-176	Similar structure of Mini BGA package with thinner and finer ball pitch that is designed for use in a wide variety of applications requiring small size, high reliability and low unit cost	Handheld devices, notebook computers, disk drives, wireless and mobile communication products
Land Grid Array (LGA)	10-52	Thinner and lighter assembly designed essential to standard BGA without solder balls, suitable for applications that require high electrical performance	Disk drives, memory controllers, wireless, mobile communication products
Multi-Chip BGA	48-137	Designed for assembly of two or more memory chips (to increase memory density) or combinations of memory and logic chips in one BGA package	Notebook computers, digital cameras, personal digital assistants, global positioning systems, sub-notebooks, board processors, wireless systems
Stacked-Chip BGA	24-162	Designed for assembly of two or more memory chips or logic and memory chips in one CSP, reducing the space required for memory chips	Cellular handsets, digital cameras, personal digital assistants, wireless systems, notebook computers, global positioning systems
Flip Chip Chip-scale Package (FCCSP)	16-1500+	Better IC protection and solder joint reliability compared to direct chip attach (DCA) and chip on board (COB)	Memory, logic, microprocessor, application processor (AP), baseband (BB), solid state device, radio frequency (RF)
Chip on Wafer (CoW)	5-30	Integrated two different functional chips to a closer form into a compact package. Low-cost solution compared to through-silicon via (TSV)	Integrated MEMS
Land Grid Array (LGA) for FPS (finger Print Sensor)	20-52	Very thin clearance (50um) between chip & compound hard color coating with scratch resistance for protection and appearance matching of mobile devices	Security protection for mobile devices, home, notebook computer, etc.
Wafer Level Chip Scale Package (WLCSP)	6-116	WLCSP package size is almost the same as die size. Simple assembly process flow, low cost. Small package suitable to apply on hand-held 3C electronic products	Electronic Compass, audio converter, nor flash product, power control, sensor magnetometer, MEMS magnetometer, CMOS Image Sensor controller, Laser diode driver, power manager IC (PMIC)

Wafer Level CSP



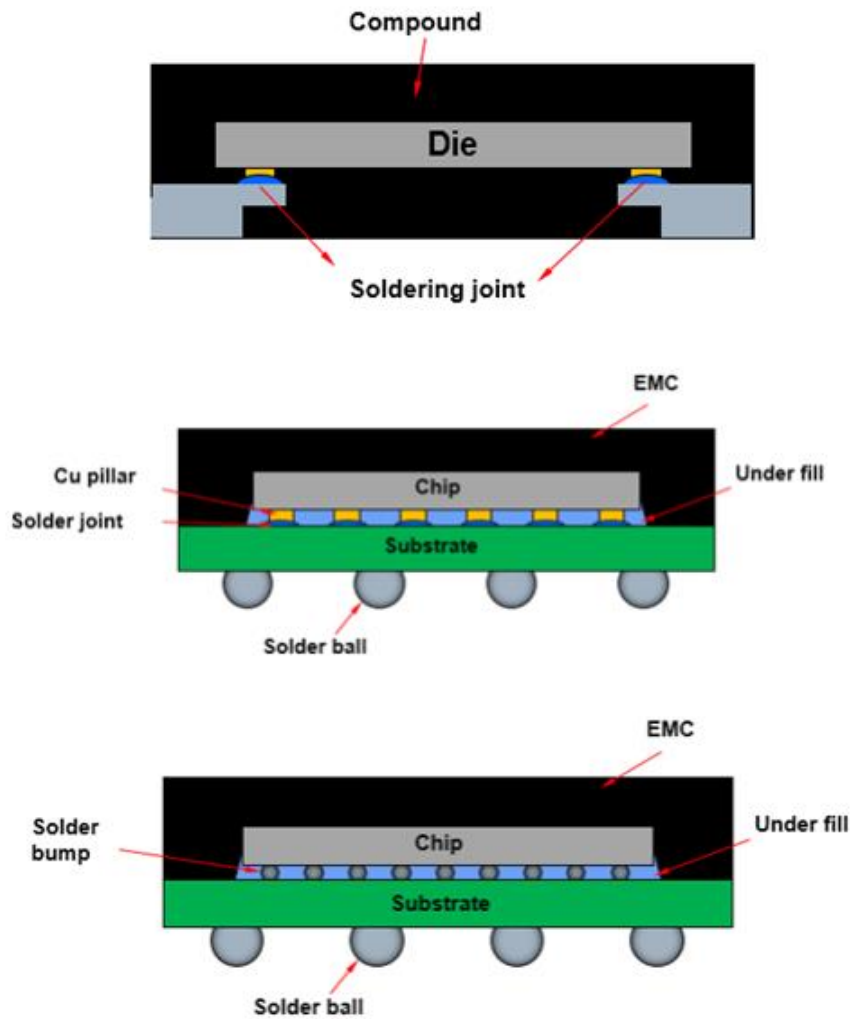
Wafer-level CSP (WLCSP) is the technology of packaging an integrated circuit at wafer level. WLCSP is essentially a true chip scale package (CSP) technology, since the resulting package is practically of the same size as the die. WLCSP has the ability to enable true integration of wafer fab, packaging, test, and burn-in at wafer level in order to streamline the manufacturing process undergone by a device start from silicon wafer to customer shipment.

Most other kinds of packaging does wafer dicing first, and then puts the individual die in a plastic package and attaches the solder bumps. WLCSP involves the RDL, wafer solder bumping, while still in the wafer, and then wafer dicing. Benefits of WLCSP compare to general CSP package assembly include:

- ultimate smaller package size;
- smaller footprint on a printed circuit board;
- very short circuit connection; and
- cost effective packaging solution for small ICs.

Package	Connections	Description	End-User Applications
WLCSP	4-64	Very small package size (identical to die size), suitable for the low pin count and require the small package size application	Memory, ASICs, PMIC, MEMS devices, controllers, for mobile phone, tablet, ultra book computer product

FC CSP



Flip-chip chip scale package (FC CSP) construction utilizes the flip chip bumping (with solder bump or Cu pillar bump) interconnection technology to replace the standard wire-bond interconnect. It allows for a smaller form factor due to wire loop reduction and area array bumping. FC CSP includes the substrate or leadframe type solution making an attractive option for advanced CSP application when electrical performance is a critical factor.

- Excellent electrical performance, very low interconnect parasitics and inductance compare to wirebond type.
- High electrical current endurance (Cu pillar bump), ideal for high power solution.
- Smaller package form factor by reducing the wire loop height and wire span compared to conventional wirebond package.

Package	Connections	Description	End-User Applications
FC CSP	8-1120	Superior electrical performance, smaller form factor	Power device, RF, Logic/Analog device, wireless or portable application

Display Driver Semiconductors and Gold Bumping

We also offer assembly and test services for display driver semiconductors. We employ TCP, COF and COG technologies for testing and assembling display driver semiconductors. In addition, we offer gold bumping services to our customers.

Tape Carrier Package (TCP) Technology

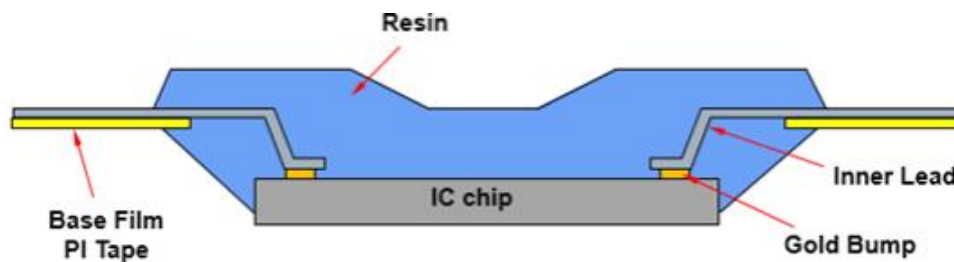
TCPs offer a high number of inputs and outputs, a thin package profile and a smaller footprint on the circuit board, without compromising performance. Key package features include surface mount technology design, fine-pitch tape format and slide carrier handling. Because of their flexibility and high number of inputs and outputs, TCPs are primarily employed either for STN-LCD or TFT-LCD driver semiconductors.

Testing of TCPs. We conduct full function testing of LCD and other display panel driver semiconductors with a specially designed probe handler to ensure reliable contact to the test pads on the TCP tape. We can test STN-LCD or TFT-LCD driver semiconductors with frequencies of up to 750 MHz and at voltages up to 40V. The test is performed in a temperature-controlled environment with the device in tape form. The assembled and tested LCD and other display panel driver semiconductors in tape form are packed between spacer tapes together with a desiccant in an aluminum bag to avoid contact during shipment.

Assembly of TCPs. TCPs use a tape-automated bonding process to connect die and tape. The printed circuit tape is shipped with a reel. The reel is then placed onto an inner lead bonder, where the LCD or other display panel driver semiconductor is configured onto the printed circuit tape. The resulting TCP component consists of the device interconnected to a three-layer tape, which includes a polyimide carrier film, an epoxy-based adhesive layer and a metal layer. The tape metallization area of the interconnections is tin plated over a metal layer. The silicon chip and inner lead area is encapsulated with a high temperature thermosetting polymer after inner lead bonding. The back face of the chip is left un-sealed for thermal connection to the printed circuit board.

For the limitation of inner lead pitch (>41um) with this kind of package, the volume of TCP nowadays has been trending down to ~1% of total demand.

The following diagram presents the basic components of a TCP:



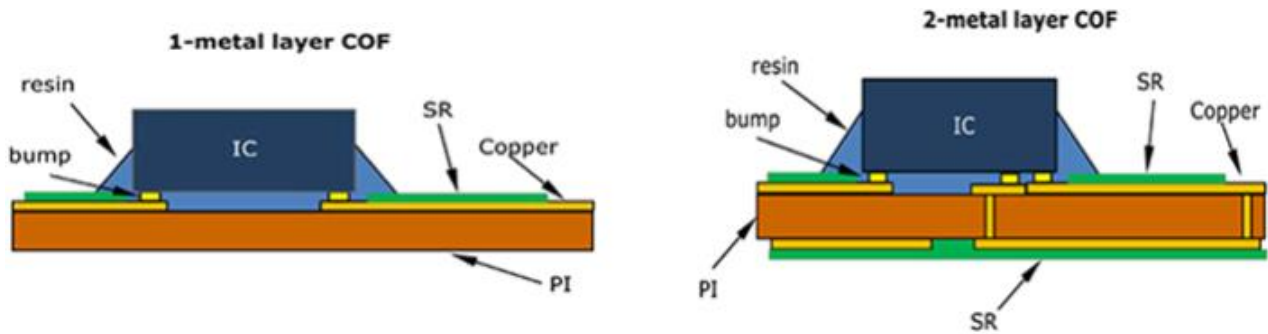
Chip-on-Film (COF) Technology

In 2001, we commenced assembly and test services using COF technology. We have developed this proprietary technology from our existing TCP technology, and it has been widely accepted by our customers. The primary use of the COF module is to replace TCP in certain applications.

COF technology provides several additional advantages. For example, COF is able to meet the size, weight and higher resolution requirements in electronic products, such as display panels. This is because of its structural design, including an adhesive-free two-layer tape that is highly flexible, bending strength and its capacity to receive finer patterning pitch.

COF package has been using for large-size and high-resolution panel display, especially on TFT-LCD and OLED TV set. In recent years, there has been an observable trend with which the average inner lead pitch of COF package went down to 23um with about 50% of market share. High thermal dissipation packaging technology is available for mass production. And dual IC with high thermal dissipation COF packaging technology is in development for 8K TV market. 18um inner lead pitch of 1-metal layer and 20um inner lead pitch 2-metal layer COF package has been released to mass production for the coming market trend of narrow frame smartphone requirement. And we can test display driver semiconductors with frequencies of up to 4 Gbps to fulfill high speed data rate requirement of semiconductor.

The following diagram presents the basic components of 1-metal layer COF and 2-metal layer COF:



The TCP and COF processes involve the following steps:

<i>Chip Probing</i>	Screen out the defect chips which fail to meet the device spec.
<i>Wafer Lapping</i>	Wafers are grounded to their required thickness.
<i>Die Saw</i>	Wafers are cut into individual dies, or chips, in preparation for inner lead bonding process For low-K wafer, laser groove is necessary before mechanical dicing saw.
<i>Inner Lead Bonding</i>	An inner lead bonder machine connects the chip to the printed circuit tape.
<i>Potting</i>	The package is dispensed a resin to protect the inner lead.
<i>Potting Cure</i>	The potting cure process matures the resin used during the potting oven with high temperatures.
<i>Marking</i>	A laser marker is used to provide product identification.
<i>Final Testing</i>	To verify device spec. within electrical testing after assembly process.
<i>Inspection and Packing</i>	Each individual die with tape is visually or auto inspected for defects. The dies are packed within a reel into an aluminum bag after completion of the inspection process.

Chip-on-Glass (COG) Technology

COG technology is an electronic assembly technology that is used in assembling display driver semiconductors including TV/monitor and mobile products. Compared to the traditional bonding process for TCP or COF, the new COG technology requires lower bonding temperature. In addition, the COG technology reduces assembly cost as it does not use tapes for interconnection between the LCD panel and the printed circuit board. The major application of COG products is on TFT-LCD and AMOLED display of smart phone market, it integrates source, gate driver of display driver IC (DDIC) and TDDI or timing Controller IC into one chip, so the output channel is larger than TCP or COF products. For the market trend of thinner smartphone, 150um in IC thickness is released for mass production and more thinner IC thickness is in development.

The COG assembly technology involves the following steps:

<i>Chip Probing</i>	To screen out the defect chips which fail to meet the device spec.
<i>Wafer Lapping/ polish</i>	Wafers are ground or with polished to their required thickness.
<i>Laser Marking</i>	A laser mark is applied on IC backside in wafer form to provide product traceability.
<i>Laser Grooving</i>	Application in wafer within Low-K material to reduce chipping of chips during dicing process.
<i>Die Saw</i>	Wafers are cut into individual dies, or chips, in preparation for the pick and place process.
<i>Auto Optical Inspection</i>	Process of wafer inspection is detecting defect to separate chips at pick and place station.
<i>Pick and Place</i>	Each individual die is picked and placed into a chip tray.
<i>Inspection and Packing</i>	Each individual die in a tray is visually or auto-inspected for defects. The dies are packed within a tray into an aluminum bag after completion of the inspection process.

Bumping

We also offer bumping services to our customers.

Based on the major product portfolio (judged by internal metal composition), we provide:

- Gold Family (Pure Au bump, Au metal composite bump and Au RDL)

Gold bumping technology, which can be used in TCP, COF and other specific. Au wire assembly process is a necessary interconnection technology for LCD and other display panel driver semiconductors. Most gold bumping services are performed on eight or twelve-inches wafers. Gold bumping technology provides the best solution for fine-pitch chips and is able to meet the highly efficient production requirement for LCD and other display panel (for example, LED and OLED) driver semiconductors or other chips that require thin packaging profiles.

- Cu/Solder Family (Cu RDL, WLCSP, Solder and Cu Pillar)

Lots of logical device have applied Cu RDL, WLCSP, Solder and Cu Pillar service for their FC CSP and/or QFN package and other wafer level package (Fan-in, Fan-out, 2.5D & 3DIC). The product scope includes but is not limited to flash, power devices and MEMS.

Both of above two portfolios which fabrication process uses thin film metal deposition, photolithography for both pattern transfer of Photoresist and PI/PBO and electrical plating technologies (WLCSP have extra ball drop process). A series of barrier and seed metal layers are deposited over the surface of the wafer. A layer of thick photoresist material is spin-coated over these barrier and seed layers. A photomask is used to pattern the locations over each of the bond pads that will be bumped. Broadband spectrum exposure and developing processes open the photoresist material, same as permanent layers (PI/PBO) which defines the bump shape, PI/PBO open size & shape. Both portfolios are then electroplated over the pad and the deposited barrier metal layers. Once the plating is complete, a series of etching steps are used to remove the photoresist material and the metal layers that are covering the rest of the wafer. All of plating structure (Au, Au metal composite bump, RDL, Solder & Cu Pillar) protects the underlying materials from being etched. The gold bumped wafers will go through an annealing furnace to soften the gold bumps to fit the hardness requirement of TCP, COF and COG assembly processes. Other PI/PBO included process need specific thermal process for better dielectric layer cross-linking to strength the film.

Other Services

Drop Shipment

We offer drop shipment of semiconductors directly to end-users designated by our customers. We provide drop shipment services, including assembly in customer-approved and branded boxes, to a majority of our assembly and test customers. Since drop shipment eliminates the additional step of inspection by the customer prior to shipment to end-users, quality of service is a key to successful drop shipment service. We believe that our ability to successfully execute our full range of services, including drop shipment services, is an important factor in maintaining existing customers as well as attracting new customers.

Software Development, Conversion and Optimization Program

We work closely with our customers to provide sophisticated software engineering services, including test program development, conversion and optimization, and related hardware design. Generally, testing requires customized testing software and related hardware to be developed for each particular product. Software is often initially provided by the customer and then converted by us at our facilities for use on one or more of our testing machines and contains varying functionality depending on the specified testing procedures. Once a conversion test program has been developed, we perform correlation and trial tests on the semiconductors.

Customer feedback on the test results enables us to adjust the conversion test programs prior to actual testing. We also typically assist our customers in collecting and analyzing the test results and recommends engineering solutions to improve their design and production process.

Customers

We believe that the following factors have been, and will continue to be, important factors in attracting and retaining customers:

- our advanced assembly and test technologies;
- our strong capabilities in testing and assembling DDIC/TDDI and other display panel driver semiconductors;
- our focus on high-density memory products and logic/mixed-signal communications products; and
- our reputation for high quality and reliable customer-focused services.

The number of our customers as of March 31 of 2017, 2018 and 2019, respectively, was 74, 78 and 76. Our top 15 customers in terms of revenue in 2018 were (in alphabetical order):

Asahi Kasei Microdevices Corporation
Elite Semiconductor Memory Technology Inc.
Etron Technology, Inc.
FocalTech Systems Co., Ltd.
Himax Technologies, Inc.
Integrated Circuit Solution Inc.
MediaTek Inc.
Macronix International Co., Ltd.
Micron Technology, Inc.
Novatek Microelectronics Corp.
Raydium Semiconductor Corporation
Synaptics Display Devices GK
Sitronix Technology Corporation
Winbond Electronics Corporation
Zentel Electronics Corp.

In 2016, our top three customers accounted for approximately 18%, 17% and 14% of our revenue, respectively. In 2017, our top three customers accounted for approximately 19%, 15% and 10% of our revenue, respectively. In 2018, our top three customers accounted for approximately 21%, 14% and 11% of our revenue, respectively.

The majority of our customers purchase our services through purchase orders and provide us three-month non-binding rolling forecasts on a monthly basis. The price for our services is typically agreed upon at the time when a purchase order is placed.

Since 2008, we have also focused on our business with smaller customers and customers who do not place orders on a regular basis.

The following table sets forth, for the periods indicated, the percentage breakdown of our revenue, categorized by geographic region based on the jurisdiction in which each customer is headquartered.

	Year ended December 31,		
	2016	2017	2018
Taiwan	69%	73%	80%
Japan	10	13	10
Singapore	17	10	6
Others	4	4	4
Total	<u>100%</u>	<u>100%</u>	<u>100%</u>

Qualification and Correlation by Customers

Our customers generally require that our facilities undergo a stringent “qualification” process during which the customer evaluates our operations, production processes and product reliability, including engineering, delivery control and testing capabilities. The qualification process typically takes up to eight weeks, or longer, depending on the requirements of the customer. For test qualification, after we have been qualified by a customer and before the customer delivers semiconductors to us for testing in volume, a process known as “correlation” is undertaken. During the correlation process, the customer provides us with test criteria; information regarding process flow and sample semiconductors to be tested and either provides us with the test program or requests that we develop a new or conversion program. In some cases, the customer also provides us with a data log of results of any testing of the semiconductor that the customer may have conducted previously. The correlation process typically takes up to two weeks, but can take longer depending on the requirements of the customer.

Sales and Marketing

We maintain sales and marketing offices in Taiwan and the United States. Our sales and marketing strategy is to focus on memory semiconductors in Taiwan, Japan, Singapore, Korea and the United States, logic/mixed-signal semiconductors in Taiwan, Japan and the United States, LCD and other display panel driver semiconductors in Japan, Taiwan, Hong Kong and Mainland China. As of March 31, 2019, our sales and marketing efforts were primarily carried out by teams of sales professionals, application engineers and technicians, totaling 28 staff members. Each of these teams focuses on specific customers and/or geographic regions. As part of our emphasis on customer service, these teams:

- actively participate in the design process at the customers’ facilities;
- resolve customer assembly and test issues; and
- promote timely and individualized resolutions to customers’ issues.

We conduct marketing research through our in-house customer service personnel and through our relationships with our customers and suppliers to keep abreast of market trends and developments. Furthermore, we do product and system bench marking analysis to understand the application and assembly technology evolution, such as analysis on mobile handsets and Tablet, PC, handfree products. In addition, we regularly collect data from different segments of the semiconductor industry and, when possible, we work closely with our customers to design and develop assembly and test services for their new products. These “co-development” or “sponsorship” projects can be critical when customers seek large-scale, early market entry with a significant new product.

We have appointed a non-exclusive sales agent for promoting our services for memory semiconductors in Korea. Our sales agent helps us promote and market our services, maintain relations with our existing and potential customers and communicate with our customers on quality, specific requirements and delivery issues. We generally pay our sales agent a commission of 3.5% of our revenue from services for memory semiconductors in Korea. In 2016, 2017 and 2018, we paid approximately NT\$4 million, NT\$5 million and NT\$3 million (US\$98 thousand), respectively, in commissions to our sales agent.

Research and Development

To maintain our competitive edge for continued business growth, we continue our focus of our investment in new technology research and development. In 2016, 2017 and 2018, we spent approximately NT\$839 million, or 4.5%, NT\$986 million, or 5.5% and NT\$939 million (US\$31 million), or 5.1%, respectively, of our revenue on research and development. We intend to sustain these efforts.

Our research and development efforts have been focused primarily on new technology instruction, improving efficiency and production yields of our assembly and test services. From time to time, we jointly develop new technologies with local and international research institutions and universities. In testing area, our research and development efforts focused particularly on high speed probing, fine pitch probing capability and wafer level burn-in technology. Our projects include:

- Ramped up high frequency testing capability for LCD and other display panel driver semiconductors;
- Built up 12” fine pitch COF assembly capability for less than 20um inner lead pitch products;
- Built up fine pitch testing capability for smaller than 10um bump pitch products;
- Developing “wafer level probing on copper pillar bump for 300mm wafers”; and
- Developing centralized server test control system.

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In bumping and assembly areas, our research and development efforts were directed to:

- Au height reduction, as part of cost reduction drive, 10um bump height COF package was released for production;
- Wafer-level chip scale packaging and 3P2M Cu RDL processes;
- Fine-pitch (5/5 um) RDL process for WLCSP and RDL products;
- Flip-chip CSP for DRAM & mixed-signal application;
- Cu pillar bumping for 300mm wafers;
- Multi-chip assembly and module of flash products for SSD and eMMC applications;
- Thin wafer lapping and dicing capabilities for stacked-die chip scale package;
- Advanced thin core/core-free, & flex substrate solutions for thin & flip chip packages;
- 2-metal layers COF assembly & COF SMT capabilities for TDDI application; and
- Qualified thermally enhanced COF and MCB COF and released for manufacturing.

For new product and product enhancement work in 2017, our work concentrates on three key development programs: 3D WLCSP, biometric sensor package solutions, and flip chip technology. In the bumping area, we completed customer qualification of 300mm wafer Au bumping process in 2012 and started volume production in Q4, 2012. Development of Cu plating enables the entry of WLCSP, RDL and flip chip market and Cu RDL applied on DRAM wafer for SiP product is qualified in 2016. Turnkey services of WLCSP and flip chip QFN have been implemented for mass production in 2013 based on the successful technology developments. In 2012, we also initiated both 200mm and 300mm Cu pillar bumping engineering work and, related packaging technologies are being developed for mixed-signal and memory products in 2013. It is also qualified on power management IC product in 2016. By integrating WLCSP bumping, copper pillar bumping and flip chip assembly capability, an integrated WLCSP (CoW or 3D WLCSP) is developing in 2015, and qualified the structure & process verification in 2016. CoW not only provides the cost effective package solution by stacking the different wafer node technology chip, but also could meet integrated function and smallest package footprint. Meanwhile, fingerprint sensor (FPS) packaging solution by LGA was also developed for smartphone demand in 2015. More and more integrated function of DDIC and TDIC, TDDI, is requested for smartphone application, therefore 2-metal layers COF solution and COF SMT are developed to provide the package solution and TDDI since 2016.

Since 2013, in-process engineering advancement allowed us to extend our wirebond technology to service MEMS products. To further achieve cost reduction, alloy wire and 0.6 mil Au wirebond processes were also developed. In 2018, we continued to work on the expansion of multi-chip NAND packages offerings, and 12" fine pitch COF assembly capability. Capability of handling miniature molded packages has been extended to 1x1 mm size and various improvements will also be made in production equipment to enhance throughput and efficiency.

As of March 31, 2019 we employed 659 employees in our research and development activities. In addition, other management and operational personnel are also involved in research and development activities but are not separately identified as research and development professionals.

We maintain laboratory facilities capable for materials and electrical characterizations to support production and new product development. Computer simulation is used to validate both mechanical and electrical models in comparison to measurement results. Enhancement of Shadow Moiré and Micro Moiré equipment was carried out to support MCP and flip chip package warpage and residue stress characterization. In Advanced Packaging Lab, rheology measurement capability and high frequency electric simulation capability were established, aimed at expanding capability for material selection and inspection to support flip chip introduction and various resin characterizations. An analytical laboratory has been built out in our bumping line providing timely support to manufacturing operations.

Quality Control

We believe that our reputation for high quality and reliable services have been an important factor in attracting and retaining leading international semiconductor companies as customers for our assembly and test services. We are committed to delivering semiconductors that meet or exceed our customers' specifications on time and at a competitive cost. We maintain quality control staff at each of our facilities.

As of March 31, 2019, we employed 334 personnel for our quality control activities. Our quality control staff typically includes engineers, technicians and other employees who monitor assembly and test processes in order to ensure high quality. We employ quality control procedures in the following critical areas:

- sales quality assurance: following market trends to anticipate customers' future needs;
- design quality assurance: when developing new testing and assembly processes;
- supplier quality assurance: consulting with our long-term suppliers;
- manufacturing quality assurance: through a comprehensive monitoring program during mass production; and
- service quality assurance: quickly and effectively responding to customers' claims after completion of sale.

All of our facilities have obtained IATF 16949 quality system certification in December 2017. In addition, our facilities in Hsinchu and Tainan have been ISO 9002 certified in September 1997 and December 1998, respectively, and recertified with ISO 9001 for substantial revision since 2015.

IATF 16949 certification system seeks to integrate quality management standards into the operation of a company, and emphasizes the supervision and measurement of process and performance. An ISO 9001 certification is required by many countries for sales of industrial products.

In addition to the quality management system, we also earned the 1998 QC Group Award from The Chinese Society of Quality, which is equivalent to the similar award from the American Society of Quality. In 2003, ChipMOS passed SONY Green Partner (Tier 2) certification through its ProMOS channel, and in 2009, ChipMOS obtained SONY Green Partner (Tier 1) certification due to its direct business relationship with SONY. Our laboratories have also been awarded Chinese National Laboratory accreditation under the categories of reliability test, electricity and temperature calibration.

Our assembly and test operations are carried out in clean rooms where air purity, temperature and humidity are controlled. To ensure the stability and integrity of our operations, we maintain clean rooms at our facilities that meet U.S. federal 209E class 100, 1,000, 10,000 and 100,000 standards. A class 1,000 clean room means a room containing less than 1,000 particles of contaminants per cubic foot.

We have established manufacturing quality control systems that are designed to ensure high-quality services to our customers and maintain reliability and high production yields at our facilities. We employ specialized equipment for manufacturing quality and reliability control, including:

- Joint Electron Device Engineering Council (JEDEC) standardized temperature cycling, thermal shock and pressure cook reliability tests;
- high and low temperature storage life tests, temperature humidity bias test and highly accelerated temperature/humidity stress test (HAST); and
- high resolution scanning acoustic tomography, scanning electronic microscope and X-Ray microscopy for physical failure analysis, curve tracer and semi-probe station for electrical failure analysis.

In addition, to enhance our performance and our research and development capabilities, we also installed a series of high-cost equipment, such as temperature humidity bias testers, low temperature storage-life testers and highly accelerated stress testers. We believe that many of our competitors do not own this equipment.

As a result of our ongoing focus on quality, in 2018, we achieved monthly assembly yields of an average of 99.91% for our memory and logic/mixed-signal assembly packages, 99.97% for our COF packages, 99.95% for our COG packages and 99.95% for our bumping products. The assembly yield, which is the industry standard for measuring production yield, is equal to the number of integrated circuit packages that are shipped back to customers divided by the number of individual integrated circuits that are attached to leadframes or organic substrate.

Raw Materials

Semiconductor testing requires minimal raw materials. Substantially all of the raw materials used in our memory and logic/mixed-signal semiconductor assembly processes are interconnect materials such as leadframes, organic substrates, gold wire and molding compound. Raw materials used in the LCD and other display panel driver semiconductor assembly and test process include carrier tape, resin, spacer tape, plastic reel, aluminum bags, and inner and outer boxes. Cost of raw materials represented 18%, 17% and 17% of our revenue in 2016, 2017 and 2018, respectively.

We do not maintain large inventories of leadframes, organic substrates, gold wire or molding compound, but generally maintain sufficient stock of each principal raw material for approximately one month's production based on blanket orders and rolling forecasts of near-term requirements received from customers. Shortage in the supply of materials experienced by the semiconductor industry have in the past resulted in price adjustments. Our principal raw material supplies have not been impacted by the Japan earthquake and tsunami catastrophe. See "Item 3. Key Information—Risk Factors—Risks Relating to Our Business—If we are unable to obtain raw materials and other necessary inputs from our suppliers in a timely and cost-effective manner, our production schedules would be delayed and we may lose customers and growth opportunities and become less profitable" for a discussion of the risks associated with our raw materials purchasing methods. For example, with the exception of aluminum bags and inner and outer boxes, which we acquire from local sources, the raw materials used in our TCP/COF process and for modules are obtained from a limited number of Japanese suppliers.

Competition

The independent assembly and test markets are very competitive. Our competitors include large IDMs with in-house testing and assembly capabilities and other independent semiconductor assembly and test companies, especially those offering vertically integrated assembly and test services, such as Advanced Semiconductor Engineering Inc., Amkor Technology, Inc., Chipbond Technology Corporation, King Yuan Electronics Co., Ltd., Powertech Technology, Jiangsu Changjiang Electronics Technology Co., Ltd. and United Test and Assembly Center Ltd. We believe that the principal measures of competitiveness in the independent semiconductor testing industry are:

- engineering capability of software development;
- quality of service;
- flexibility;
- capacity;
- production cycle time; and
- price.

In assembly services, we compete primarily on the basis of:

- production yield;
- production cycle time;
- process technology, including our COF technology for LCD and other display panel driver semiconductor assembly services;
- quality of service;
- capacity;
- location; and
- price.

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IDMs that use our services continually evaluate our performance against their own in-house assembly and test capabilities. These IDMs may have access to more advanced technologies and greater financial and other resources than we do. We believe, however, that we can offer greater efficiency and lower costs while maintaining an equivalent or higher level of quality for three reasons:

- firstly, we offer a broader and more complex range of services as compared to the IDMs, which tend to focus their resources on improving their front-end operations;
- secondly, we generally have lower unit costs because of our higher utilization rates and thus enabling us to operate at a more cost-effective structure compared to the IDMs; and
- finally, we offer a wider range of services in terms of complexity and technology.

Intellectual Property

As of March 31, 2019, we held 483 patents in Taiwan, 178 patents in the United States, 271 patents in the People’s Republic of China and 1 patent in the United Kingdom, France, and Germany, respectively, and 2 patents in Korea and Japan, respectively, relating to various semiconductor assembly and test technologies. These patents will expire at various dates through to 2038. As of March 31, 2019, we also had a total of 1 pending patent applications in the United States, 21 in Taiwan, 66 in the People’s Republic of China, and 1 in Europe. In addition, we have registered “ChipMOS” and its logo and “InPack” as trademarks in Taiwan, and “ChipMOS” and its logo as trademarks in the United States, the People’s Republic of China, Singapore, Hong Kong, Korea, Japan and the European Community.

We expect to continue to file patent applications where appropriate to protect our proprietary technologies. We may need to enforce our patents or other intellectual property rights or to defend ourselves against claimed infringement of the rights of others through litigation, which could result in substantial costs and a diversion of our resources. See “Item 3. Key Information—Risk Factors—Risks Relating to Our Business—Disputes over intellectual property rights could be costly, deprive us of technologies necessary for us to stay competitive, render us unable to provide some of our services and reduce our opportunities to generate revenue”.

Government Regulations

As discussed above under “—Intellectual Property”, governmental regulation of our intellectual property may materially affect our business. The failure to protect our property rights would deprive us of our ability to stay competitive in the semiconductor industry. Our intellectual property rights are protected by the relevant patent and intellectual property agencies of the European Community, United States, the People’s Republic of China, Singapore, Hong Kong, Korea, Japan and Taiwan.

Environmental Matters

Semiconductor testing does not generate significant pollutants. The semiconductor assembly and gold bumping process generate stationary acid, alkali and VOC pollutions, principally at the plating and etching stages. Water waste is produced when silicon wafers are ground thinner, diced into chips with the aid of diamond saws and cleaned with running water. In addition, excess materials, either on lead-frames or molding process, are removed from assembled semiconductors in the trimming and de-junking processes, respectively. We have various treatment equipments for wastewater and air pollutants at our assembly and bumping facilities. Since 2001, we have adopted certain environmentally-friendly production management systems, and have implemented certain measures intended to bring our all processes in compliance with the Restriction of Hazardous Substances Directive /EC issued by the European Union and our customers. We believe that we have adequate and effective environmental protection measures that are consistent with semiconductor industry practices in Taiwan. In addition, we believe we are in compliance in all material respects with current environmental laws and regulations applicable to our operations and facilities.

All of our facilities in Taiwan have been certified as meeting the ISO 14001 environmental standards of the International Organization for Standardization, and all of our facilities in Taiwan have been certified as meeting the OHSAS18001 standards of the International Organization for Standardization. Our facilities at Hsinchu Science Park, Chupei, Hokou Industrial Park and Southern Taiwan Science Park have won numerous awards including Green Factory Label, “Enterprises Environmental Protection Award”, “Occupational Safety and Health Excellent Award”, “Green Building Label” and “Health Promotion Awards” during 2012 ~ 2018. We continue to encourage our employees to participate in community environmental campaigns and better environmental friendly practices.

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We will continue to enhance related management to reduce industrial waste, save energy and control pollution. For products in conformity with Green Product Requirement, the Company obtained Green Partner certification from Sony Corporation of Japan. Furthermore we passed QC080000 certification and “Greenhouse Gas Verification Statement” (ISO14064-1) from 2013 until now. We further confirmed many product’s CFP “Carbon Footprint Verification Statement” (ISO14067) and WFN “Water Footprint Verification Statement” (ISO14046). At the same time, Tainan and Hsinchu plants passed the certification of energy management program (“ISO 50001”) since 2015 until now. We plan to arrange all of ChipMOS plants to pass the certification of ISO 50001 in the near future. For materials management, we passed the “Material Flow Cost Accounting (MFCA, ISO14051)” to reduce the loss. Our policy is to pay attention to the environment issues by standardizing on green, environmental friendly products, cleaner process and enhance supplier chain management to meet ChipMOS’ Corporate Social Responsibilities.

Insurance

We maintain insurance policies on our buildings, equipment and inventories. These insurance policies cover property damages due to all risks, including but not limited to, fire, lightning and earthquakes. The maximum coverage of property insurance for the Company is approximately NT\$91,409 million.

Insurance coverage on facilities under construction is maintained by us and our contractors, who are obligated to procure necessary insurance policies and bear the relevant expenses of which we are the beneficiary. We also maintain insurance on the wafers delivered to us while these wafers are in our possession and during transportation from suppliers to us and from us to our customers.

Employees

See “Item 6. Directors, Senior Management and Employees—Employees” for certain information relating to our employees.

Taxation

See “Item 5. Operating and Financial Review and Prospects—Taxation” for certain information regarding the effect of ROC tax regulations on our operations.

Facilities

We provide testing services through our facilities in Taiwan at following locations: Chupei, the Hsinchu Industrial Park, the Hsinchu Science Park, and the Southern Taiwan Science Park. We provide assembly services through our facility at the Southern Taiwan Science Park. We own the land for our Hsinchu Industrial Park testing facility and Chupei facility and we lease two parcels of land for our Hsinchu Science Park testing facility with lease expiration in year 2027 and 2034, respectively, and two parcels of land for our Southern Taiwan Science Park facility with lease expiration in year 2024 and 2032.

The following table shows the location, primary use and size of each of our facilities, and the principal equipment installed at each facility, as of March 31, 2019.

<u>Location of Facility</u>	<u>Primary Use</u>	<u>Floor Area (m2)</u>	<u>Principal Equipment</u>
Chupei, Hsinchu	Testing/Gold Bumping	38,166	9 steppers 18 sputters 285 testers
Hsinchu Industrial Park	Testing	25,864	89 testers 28 burn-in ovens
Hsinchu Science Park	Testing	31,168	158 testers 73 burn-in ovens
Southern Taiwan Science Park	Assembly/Testing	161,483	713 wire bonders 113 inner-lead bonders 546 testers

Equipment

Testing of Memory and Logic/Mixed-Signal Semiconductors

Test equipment is the most capital-intensive component of the memory and logic/mixed-signal semiconductors test business. Upon the acquisition of new test equipment, we install, configure, calibrate and perform burn-in diagnostic tests on the equipment. We also establish parameters for the test equipment based on anticipated requirements of existing and potential customers and considerations relating to market trends. As of March 31, 2019, we operated 532 testers for testing memory and logic/mixed-signal semiconductors. We generally seek to purchase testers with similar functionality that are able to test a variety of different semiconductors. We purchase testers from international manufacturers Advantest Corporation and Teradyne Inc.

In general, particular semiconductors can be tested using a limited number of specially designed testers. As part of the qualification process, customers will specify the machines on which their semiconductors may be tested. We often develop test program conversion tools that enable us to test semiconductors on multiple equipment platforms. This portability among testers enables us to allocate semiconductor testing across our available testing capacity and thereby improve capacity utilization rates. If a customer requires the testing of a semiconductor that is not yet fully developed, the customer consigns its testing software programs to us to test specific functions. If a customer specifies test equipment that is not widely applicable to other semiconductors we test, we require the customer to furnish the equipment on a consignment basis.

We will continue to acquire additional test equipment in the future to the extent market conditions, cash generated from operations, the availability of financing and other factors make it desirable to do so. Some of the equipment and related spare parts that we require have been in short supply in recent years. Moreover, the equipment is only available from a limited number of vendors or is manufactured in relatively limited quantities and may have lead time from order to delivery in excess of six months.

Assembly of Memory and Logic/Mixed-Signal Semiconductors

The number of wire bonders at a given facility is commonly used as a measure of the assembly capacity of the facility. Typically, wire bonders may be used, with minor modifications, for the assembly of different products. We purchase wire bonders principally from Shinkawa Co., Ltd. and Kulicke & Soffa Industries Inc. As of March 31, 2019, we operated 713 wire bonders. In addition to wire bonders, we maintain a variety of other types of assembly equipment, such as wafer grinders, wafer mounters, wafer saws, die bonders, automated molding machines, laser markers, solder platers, pad printers, dejunkers, trimmers, formers, substrate saws and lead scanners.

Gold Bumping, Assembly and Test of LCD and Other Display Panel Driver Semiconductors

We acquired TCP-related equipment from Sharp to begin our TCP-related services. We subsequently purchased additional TCP-related testers from Yokogawa Electric Corp. and Advantest Corporation and assembly equipment from Shibaura Mechatronics Corp., SETEC CORPORATION and GMM Corp. As of March 31, 2019, we operated 9 steppers and 18 sputters for gold bumping, 113 inner-lead bonders for assembly and 546 testers for LCD and other display panel driver semiconductors. We are currently in the process of purchasing additional test equipment. The test equipment can be used for the TCP, COF and COG processes, while the inner-lead bonders are only used in the TCP and COF processes. The same types of wafer grinding, auto wafer mount and die saw equipment is used for the TCP, COF and COG processes. In addition, auto inspection machines and manual work are used in the COG process, which is more labor-intensive than the TCP and COF processes.

Item 4A. Unresolved Staff Comments

Not applicable.

Item 5. Operating and Financial Review and Prospects

This discussion and analysis should be read in conjunction with our consolidated financial statements and related notes contained in this Annual Report on Form 20-F.

Overview

We provide a broad range of back-end assembly and test services. Test services include wafer probing and final testing of memory and logic/mixed-signal semiconductors. We also offer a broad selection of leadframe and organic substrate-based package assembly services for memory and logic/mixed-signal semiconductors. Our advanced leadframe-based packages include thin small outline packages, or TSOPs, and our advanced organic substrate-based packages include fine-pitch ball grid array, or fine-pitch BGA, packages. We also offer WLCSP products and turn-key flip chip assembly and test services using variety of leadframe and organic substrate carries. In addition, we provide gold bumping, reel to reel assembly and test services for LCD, OLED and other display panel driver semiconductors by employing TCP, COF and COG technologies. Our copper bumping technology supports non-driver type of products, such as RDL, copper pillar, WLCSP etc. In 2018, our consolidated revenue was NT\$18,480 million (US\$604 million) and our profit for the year attributable to equity holders of the Company was NT\$1,326 million (US\$43 million).

We are a company limited by shares, incorporated in ROC on July 28, 1997 as a joint venture company of Mosel and Siliconware Precision and with the participation of other investors. We provide our services through our subsidiaries and affiliates.

Following the completion of the share exchange transaction between ChipMOS Bermuda and the Company on September 14, 2007, the Company became a wholly-owned subsidiary of ChipMOS Bermuda. In February 2010, ChipMOS Bermuda agreed to sell 15.8% of the Company's outstanding shares to Siliconware Precision. The share purchase transaction was completed in January 2011. As part of the Company's listing plan on the TWSE, on April 16, 2013, ChipMOS Bermuda completed the sale of 6.5 million outstanding shares or 0.8% of the total number of outstanding shares of the Company, at the price of NT\$15.0 per share to the Company's underwriters and to certain others, including non-US employees of the Company. Also, from September 2, 2013 to October 3, 2013, ChipMOS Bermuda completed another sale of 180 million outstanding shares or 21.4% of the total number of outstanding shares of the Company, at the price of NT\$20.0 per share to investors. On April 9, 2014, ChipMOS Bermuda sold approximately 1.3 million shares of the Company as "green shoe" option to market investors. The Company became listed and commenced trading on the main board of TWSE on April 11, 2014. See "Item 3. Key Information—Risk Factors—Risks Relating to Our Common Shares or ADSs—The Company's ability to maintain its listing and trading status of common shares on the Taiwan Stock Exchange or ADSs on the NASDAQ Stock Market is dependent on factors outside of the Company's control and satisfaction of stock exchange requirements. The Company may not be able to overcome such factors that disrupt its trading status of common shares on the Taiwan Stock Exchange or ADSs on the NASDAQ Stock Market or satisfy other eligibility requirements that may be required of it in the future" for additional information.

On December 11, 2015, the board of the Company authorized and the Company and Tsinghua Unigroup executed the Tsinghua Share Subscription Agreement, which is included as Exhibit 4.3, to sell and issue 299,252,000 shares of the Company to Tsinghua Unigroup through the Private Placement at a price of NT\$40.0 per common share of the Company representing an aggregate purchase price of approximately NT\$12.0 billion. The Company and Tsinghua Unigroup and its subsidiary also have entered into other agreements related to the Tsinghua Share Subscription Agreement. On November 30, 2016, the Company and Tsinghua Unigroup mutually agreed to terminate the Tsinghua Share Subscription Agreement and to form a joint-venture. Under the joint-venture, ChipMOS BVI, a wholly-owned subsidiary of the Company, would sell 54.98% of the equity interests of its wholly-owned subsidiary, Unimos Shanghai, to strategic investors, including Unigroup Guowei, a subsidiary of Tsinghua Unigroup, which will hold 48% equity interests of Unimos Shanghai, and the other strategic investors, including a limited partnership owned by Unimos Shanghai's employees, will own 6.98% equity interest of Unimos Shanghai. In March 2017, ChipMOS BVI completed the sale of 54.98% equity interests of Unimos Shanghai to Unigroup Guowei and other strategic investors. Unimos Shanghai was no longer the subsidiary of ChipMOS BVI. On June 30, 2017, we completed the first stage capital injection of Unimos Shanghai, and on January 19, 2018, completed the second stage capital injection of Unimos Shanghai. See "Item 4. Information on the Company—Our Structure and History" for more details.

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On January 21, 2016, ChipMOS Bermuda and the Company entered into the Merger Agreement, pursuant to which ChipMOS Bermuda merged with and into the Company, with the latter being the surviving company after the Merger. Pursuant to the Merger Agreement, at the effective time, each ChipMOS Bermuda share issued and outstanding immediately prior to the effective time was cancelled and, in exchange, each former holder of such cancelled ChipMOS Bermuda shares was entitled to receive, with respect to each such ChipMOS Bermuda share, (i) 0.9355 ADS, representing 18.71 the Company share, each ADS representing 20 common shares of the Company, and (ii) US\$3.71 in cash, without interest, net of any applicable withholding tax. Upon completion of the Merger, the Company and its subsidiaries owned continued to conduct the business that they conducted in substantially the same manner. For additional information regarding the Merger see “Item 4. Information on the Company”.

We conduct testing operations in our facilities at the Hsinchu Science Park, the Hsinchu Industrial Park and Chupei, gold bumping and wafer testing in our facility at Chupei, and assembly and testing operations in our facility at the Southern Taiwan Science Park. We also conduct operations in Mainland China through Unimos Shanghai, a 45.02%-owned affiliate of ChipMOS BVI. Unimos Shanghai operates an assembly and test facility at the Qingpu Industrial Zone in Shanghai.

The following key trends are important to understanding our business:

Capital Intensive Nature of Our Business. Our operations, in particular our testing operations, are characterized by relatively high fixed costs. We expect to continue to incur substantial depreciation and other expenses as a result of our previous acquisitions of assembly and test equipment and facilities. Our profitability depends in part not only on absolute pricing levels for our services, but also on capacity utilization rates for our assembly and test equipment. In particular, increases or decreases in our capacity utilization rates could significantly affect our gross margins since the unit cost of assembly and test services generally decreases as fixed costs are allocated over a larger number of units.

The current generation of advanced testers typically cost between US\$1 million and US\$5 million each, while wire bonders used in assembly typically cost approximately US\$68 thousand each and inner-lead bonders for TCP and COF assembly cost approximately US\$360 thousand each and COG chip sorters cost approximately US\$220 thousand each. We begin depreciating our equipment when it is placed into commercial operation. There may be a time lag between the time when our equipment is placed into commercial operation and when it achieves high levels of utilization. In periods of depressed semiconductor industry conditions, we may experience lower than expected demand from our customers and a sharp decline in the average selling prices of our assembly and test services, resulting in an increase in depreciation expenses relative to revenue. In particular, the capacity utilization rates for our test equipment may be severely adversely affected during a semiconductor industry downturn as a result of the decrease in outsourcing demand from integrated device manufacturers, or IDMs, which typically maintain larger in-house testing capacity than in-house assembly capacity.

Highly Cyclical Nature of the Semiconductor Industry. The worldwide semiconductor industry has experienced peaks and troughs over the last decade. The overall outsourced assembly and test services for memory and logic/mixed-signal semiconductors increased gradually each year since 2016. But the average market price declined since Q3 2018 that also reflect the softer demand of memory products, including DRAM and Flash. That intensify our difficulties to maintain capacity utilization rates and gross margin.

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Declining Average Selling Prices of Our Assembly and Test Services. The semiconductor industry is characterized by a general decrease in prices for products and services over the course of their product and technology life cycles. The rate of decline is particularly steep during periods of intense competition and adverse market conditions. The average selling prices of our assembly and test services experienced sharp declines during such periods as a result of intense price competition from other independent assembly and test companies that attempt to maintain high capacity utilization levels in the face of reduced demand.

To offset the effects of decreasing average selling prices, we will continue to seek to:

- improve production efficiency and attain high capacity utilization rates;
- concentrate on testing of potentially high-demand, high-growth semiconductors;
- develop new assembly technologies; and
- implement new technologies and platforms to shift into potentially higher margin services.

Market Conditions for the End-User Applications for Semiconductors. Market conditions in the semiconductor industry, to a large degree, track those for their end-user applications. Any deterioration in the market conditions for the end-user applications of semiconductors that we test and assemble may reduce demand for our services and, in turn, materially adversely affect our financial condition and results of operations. Our revenue is largely attributable to fees from testing and assembling semiconductors including DDIC and non-DDIC electronic components, for use in smart mobile devices, automotive and industrial market. Continuous pricing pressure on our assembly and test services would negatively affect our earnings.

Change in Product Mix. Increased in average selling prices of DDIC service since 2018 have been partially offset by a change in our revenue mix. In particular, revenue from assembly and test of LCD and other display panel driver semiconductors, bumping services and 12-inch COF processing have increased as a percentage of our total revenue in 2018. We intend to continue focusing on testing and assembling more semiconductors that have the potential to provide higher margins and developing and offering new technologies in testing and assembly services, in order to mitigate the effects of declining average selling prices for our services on our ability to attain profitability.

Recent Acquisitions

On December 11, 2015, the board of the Company authorized and the Company and Tsinghua Unigroup executed the Tsinghua Share Subscription Agreement, which is included as Exhibit 4.3, to sell and issue 299,252,000 shares of the Company to Tsinghua Unigroup through the Private Placement at a price of NT\$40.0 per common share representing an aggregate purchase price of approximately NT\$12.0 billion. The Company and Tsinghua Unigroup and its subsidiary also have entered into other agreements related to the Tsinghua Share Subscription Agreement. On November 30, 2016, the Company and Tsinghua Unigroup mutually agreed to terminate the Tsinghua Share Subscription Agreement and to form a joint-venture. Under the joint-venture, ChipMOS BVI, a wholly-owned subsidiary of the Company, would sell 54.98% of the equity interests of its wholly-owned subsidiary, Unimos Shanghai, to strategic investors, including Unigroup Guowei, a subsidiary of Tsinghua Unigroup, which will hold 48% equity interests of Unimos Shanghai, and the other strategic investors, including a limited partnership owned by Unimos Shanghai's employees, will own approximately 6.98% equity interest of Unimos Shanghai. As of December 31, 2016, the equity transfer was not completed, and therefore, the assets, liabilities and equity related to Unimos Shanghai have been reclassified as held for sale and presented as discontinued operations according to IFRS 5 "Non-current Assets Held for Sale and Discontinued Operations". The equity transfer was completed in March 2017 and Unimos Shanghai is no longer a subsidiary of the Company. For additional information see "Item 4. Information on the Company—Agreements with Tsinghua Unigroup Ltd."

On January 21, 2016, the board of directors of ChipMOS Bermuda approved the merger with and into the Company, with the later being the surviving company. In accordance with the agreement and plan of merger entered into between the Company and ChipMOS Bermuda on January 21, 2016, the shareholders of ChipMOS Bermuda received (i) US\$3.71 in cash and (ii) 0.9355 ADS representing 18.71 shares of the Company (each ADS representing 20 new common shares, par value of NT\$10 each, to be issued by the Company) in exchange for each outstanding ChipMOS Bermuda common share. The Merger was completed and effective on October 31, 2016. The transaction was accounted as a capital reorganization within the Group. The Company's comparative financial statements present financial information as if ChipMOS Bermuda had always been combined with the Company, restated retrospectively. The Company issued 512,405,340 common shares represented by the ADSs and the ADSs were listed on the NASDAQ Global Select Market on November 1, 2016.

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On April 2, 2019, the board of directors of the Company adopted a resolution to dispose 9,100,000 common shares, or 9.1% equity investment in associate JMC ELECTRONICS CO., LTD. (“JMC”). The disposal was carried out on the public market and completed on April 8, 2019. We will continue to own 10 million common shares of JMC, representing 10.0% of the total shares outstanding.

Revenue

We conduct our business according to the following main business segments: (1) testing services for memory and logic/mixed-signal semiconductors; (2) assembly services for memory and logic/mixed-signal semiconductors; (3) LCD and other display panel driver semiconductor testing and assembly services; and (4) bumping services for memory, logic/mixed-signal and LCD and other display panel driver semiconductors. The following table sets forth, for the periods indicated, our consolidated revenue for each segment.

	Year ended December 31,			
	2016	2017	2018	2018
	NT\$	NT\$	NT\$	US\$
		(in millions)		
Testing	\$ 4,587.1	\$ 4,838.2	\$ 4,790.1	\$156.5
Assembly	5,880.8	5,259.3	4,679.7	152.9
LCD and other display panel driver semiconductor assembly and testing	4,920.3	4,789.9	5,694.7	186.0
Bumping	2,999.4	3,053.5	3,315.5	108.3
Total	<u>\$18,387.6</u>	<u>\$17,940.9</u>	<u>\$18,480.0</u>	<u>\$603.7</u>

Our revenue consists primarily of service fees for testing and assembling semiconductors, and to a lesser extent, fees from equipment rentals to semiconductor manufacturers for engineering testing, less allowances for product returns. We offer assembly and test services for memory semiconductors, logic/mixed-signal semiconductors, assembly and test services for LCD and other display panel driver semiconductors and bumping services.

Most of our customers do not place purchase orders far in advance and our contracts with customers generally do not require minimum purchases of our products or services. Our customers’ purchase orders have varied significantly from period to period because demand for their products is often volatile. We have strategically entered into long-term capacity agreements with some of our customers. Under certain of those long-term agreements, we have agreed to reserve capacity for our customers and our customers have agreed to place orders in the amount of the reserved capacity (which is subject in certain cases to reduction by the customers). As part of our strategy, we intend to continue entry into additional long-term capacity agreements as well as focus on our business with smaller customers or customers who do not place orders on a regular basis. We believe that the dual focused strategy would assist us to be better prepared for the current economic volatility and ensure maximum utilization rate of our capacity and help us to develop closer relationships with all types of our customers. Depending on customer demands, market conditions and other considerations, we remain to be focused on expansion of our operations with possible future long-term capacity agreements.

Our financial condition and results of operations have also been, and are likely to continue to be, affected by price pressures on our service fees, which tend to decline in tandem with the declining average selling prices of the products we test and assemble over the course of their product and technology life cycles. In order to maintain our margins, it is necessary to offset the fee erosion by continually improving our production efficiency and maintaining high capacity utilization rates. We also plan to continue to develop and implement new technologies and expand our services into potentially higher-margin segments. These efforts require significant upfront investment in advance of incremental revenue, which could impact our margins.

Pricing

We price our testing fees primarily based on the cost of testing the products to our customers' specifications, including the costs of the required material and components, the depreciation expenses relating to the equipment involved and our overhead expenses, and with reference to prevailing market prices. Accordingly, the testing fee for a particular product would principally depend on the time taken to perform the tests, the complexity of the product and the testing process, and the cost of the equipment used to perform the test. For example, testing fees for memory semiconductors are significantly higher than those for other products because of the longer time required and the need for burn-in testing. In addition, TDDI as a multi-functional product which is DDIC with touch function, its testing process required longer testing time than traditional DDIC, thus the testing cost also will be higher than DDIC product.

We price our assembly services on a per unit basis, taking into account the complexity of the package, our costs, including the costs of the required material and components, the depreciation expenses relating to the equipment involved and our overhead expenses, prevailing market conditions, the order size, the strength and history of our relationship with the customer and our capacity utilization.

We price our assembly and test services for DDIC/TDDI and other display panel driver semiconductors and bumping services on the basis of our costs, including the costs of the required material and components, the depreciation expenses relating to the equipment involved and our overhead expenses, and the price for comparable services.

On a case by case, we offer volume discounts to customers who purchase large quantities of our services and special discounts to customers who use our vertically integrated services and may offer special payment terms, including longer payment cycles, to key customers during downturns in the market so as to retain business from such key customers.

Revenue Recognition

We generally recognize our revenue from services for assembly and test services based on the progress towards completion of performance obligation during the service period. The progress towards completion on assembly services is measured by the actual input costs relative to estimate total expected input costs. The progress towards completion on testing services is measured by the actual incurred testing volume comparing to planned total testing volume. We believe that aforementioned methods are the most appropriate manner to measure the satisfaction of performance obligation to customers because the input costs incurred to assembly and testing volume completed in testing services are based on customer's specification and not linear over the duration of these services.

Related Party Revenues

In 2016, 2017 and 2018, nil, less than 1% and less than 1%, respectively, of our net revenue were derived from related parties. We believe that our transactions with related parties were entered into on an arm's length basis as discussed in the preceding paragraph. See "Item 7. Major Shareholders and Related Party Transactions" for more information concerning our related party transactions.

Geography and Currency

The majority of our revenue is generated from customers headquartered in Taiwan, which represented 69%, 73% and 80% of our revenue in 2016, 2017 and 2018, respectively. We also generate revenue from customers in Singapore, Japan and other countries. Our service fees and revenue are generally denominated in the currency of the jurisdiction in which our facilities are located, for example NT dollars for our Taiwan operations. As we generate most of our revenue from Taiwanese customers using our Taiwanese operations, and since most of our labor and overhead costs are denominated in NT dollars, we consider the NT dollar to be our functional currency.

See Note 35 to our consolidated financial statements contained in this Annual Report on Form 20-F and "Item 11. Quantitative and Qualitative Disclosure about Market Risk—Market Risks—Foreign Currency Exchange Rate Risks" for certain information on our exchange rate risks.

Cost of Revenue and Gross Profit

Our cost of revenue consists primarily of the following: depreciation and amortization expenses, raw material costs, and labor and overhead expenses, which primarily include expendable equipment, utilities expenses and inventory supplies. Our operations, in particular our testing, are characterized by relatively high fixed costs. We expect to continue to incur substantial depreciation and other expenses as a result of our previous and future acquisitions of assembly and test equipment and facilities. As of March 31, 2019, we had 1,078 testers, 101 burn-in ovens, 713 wire bonders, 113 inner-lead bonders, 9 steppers and 18 sputters. We use inner-lead bonders for the assembly of LCD and other display panel driver semiconductors using TCP or COF technology, and wire bonders for TSOP, BGA, and some other package assembly technologies.

Our profitability depends in part not only on absolute pricing levels for our services, but also on our capacity utilization rates. Our average capacity utilization rate for testing of memory and logic/mixed-signal semiconductors was 70% in 2016, 79% in 2017 and 77% in 2018. Our average capacity utilization rate for assembly of memory and logic/mixed-signal semiconductors was 64% in 2016, 66% in 2017 and 64% in 2018. Our average capacity utilization rate for LCD and other display panel driver semiconductor testing and assembly was 77% in 2016, 85% in 2017 and 80% in 2018. In addition, our average capacity utilization rate for bumping was 68% in 2016, 69% in 2017 and 72% in 2018.

For each period of time selected, we derived the capacity utilization rate for our testing operations by dividing the total number of hours of actual use of our facilities' test equipment units by the maximum number of hours that these equipment units were capable of being used. The testing capacity utilization rate generally increases in correlation to increases in the total volume of our customer orders, and generally decreases in correlation to decreases in the total volume of our customer orders.

For each period of time selected, we derived the capacity utilization rate for our assembly operations by dividing the total number of units actually produced by our assembly facilities by the maximum number of units that these facilities are capable of producing. The assembly capacity utilization rate generally increases in correlation to increases in the total volume of our customer orders, and generally decreases in correlation to decreases in the total volume of our customer orders.

Our gross revenue is generally the product of the progress towards completion multiplied by the average selling price per deliverable unit from our assembly or testing services, as the case may be. As a result, in a period where the average selling prices for our services do not fluctuate significantly, increases or decreases in our capacity utilization rates generally correlate to increases or decreases in our gross revenue. Periods with significant increases in the average selling prices for our services reduce the negative impact on our gross revenue from any decreases in our capacity utilization rates. Similarly, periods with significant decreases in the average selling prices for our services reduce the positive impact on our gross revenue from any increases in our capacity utilization rates.

The Company has significant fixed costs in operating our assembly and test facilities. For this reason, decreases in our cost of goods sold during a period generally occur at a slower rate than decreases, during the same period, in our gross revenue due to lower capacity utilization rates, lower average selling prices for our services, or both. Also, as a result, our gross margin and profitability generally decrease in correlation to decreases in our capacity utilization rates, decreases in our average selling prices for our services, or both. Similarly, our gross margin and profitability generally increase in correlation to increases in our capacity utilization rates, increases in our average selling prices for our services, or both. Due to the cyclical nature of the semiconductor industry, customer orders may change significantly, causing fluctuation in our capacity utilization rate and average selling prices for our service.

Most of our labor and overhead costs are denominated in NT dollars. However, we also incur costs of revenues and operating expenses associated with assembly and test services in several other currencies, including Japanese yen, US dollars and RMB. In addition, a substantial portion of our capital expenditures, primarily for the purchase of assembly and test equipment, has been, and is expected to continue to be, denominated in Japanese yen with much of the remainder denominated in US dollars.

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The following table sets forth, for the periods indicated, our gross profit and our gross profit margin as a percentage of revenue.

	Year ended December 31,			
	2016	2017	2018	2018
	NT\$	NT\$	NT\$	US\$
(in millions)				
Gross profit:				
Testing	\$1,689.9	\$1,733.4	\$1,612.2	\$ 52.7
Assembly	661.8	265.1	148.4	4.8
LCD and other display panel driver semiconductor assembly and testing	1,311.3	1,221.4	1,547.4	50.6
Bumping	(20.9)	17.3	122.0	4.0
Total	<u>\$3,642.1</u>	<u>\$3,237.2</u>	<u>\$3,430.0</u>	<u>\$112.1</u>
Gross profit margin:				
Testing	36.8%	35.8%	33.7%	33.7%
Assembly	11.3	5.0	3.2	3.2
LCD and other display panel driver semiconductor assembly and testing	26.7	25.5	27.2	27.2
Bumping	(0.7)	0.6	3.7	3.7
Overall	19.8%	18.0%	18.6%	18.6%

Operating Expenses

Research and Development

Research and development expenses consist primarily of personnel expenses, expenditures to qualify our services for specific customers and other consulting fees and certification fees paid to third parties. Research and development expenses are recognized as they are incurred. We currently expect that research and development expenses will increase in the future as we continue to explore new technologies and service offerings. We also expect to hire additional employees in our research and development department.

Sales and Marketing

Sales and marketing expenses consist primarily of shipping and handling expenses incurred in delivering products to our customers' designated locations, advertising, corporate communications and other marketing expenses, salary expenses for sales and marketing personnel, sales commission, professional service fees, bad debt provision and service support expenses.

General and Administrative

General and administrative expenses consist of salaries and related expenses for executive, finance and accounting, and management information systems personnel, professional service fees, and other corporate expenses. They also include stock-based compensation that is expensed using the fair value method. See "Item 6. Directors, Senior Management and Employees—Restricted Shares" for more information concerning our plan of restricted shares. We expect general and administrative expenses to increase in absolute terms as we add personnel and incur additional expenses related to the growth of our business and operations.

Other Operating Income (Expenses), Net

Our other operating income principally consists of gain on disposal of scrapped materials, royalty income, gain on disposal of items purchased on behalf of others and gain on disposal of property, plant and equipment.

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Other Non-Operating Income (Expenses), Net

Our other non-operating income principally consists of interest income, foreign exchange gain, reimbursement of ADSs service charge and gains on valuation of financial assets at fair value through profit or loss.

Our other non-operating expenses principally consist of foreign exchange losses.

Profit for the Year Attributable to Equity Holders of the Company

Our profit for the year attributable to equity holders of the Company were NT\$1,707 million, NT\$2,797 million and NT\$1,326 million (US\$43 million) in 2016, 2017 and 2018, respectively. We believe our future results will be dependent upon the overall economic conditions in the markets we serve, the competitive environment in which we operate, and our ability to successfully implement our strategy, among other things. For additional information on factors that will affect our future performance, see “Item 3. Key Information—Risk Factors”.

Results of Operations

The following table presents selected operating data as a percentage of revenue for the periods indicated:

	Year ended December 31,		
	2016	2017	2018
Revenue	100.0%	100.0%	100.0%
Cost of revenue	(80.2)	(82.0)	(81.4)
Gross profit	19.8	18.0	18.6
Research and development expenses	(4.5)	(5.5)	(5.1)
Sales and marketing expenses	(0.4)	(0.4)	(0.3)
General and administrative expenses	(4.5)	(3.6)	(2.6)
Other operating income, net	0.5	3.9	0.8
Operating profit	10.9	12.4	11.4
Finance costs	(1.0)	(1.2)	(1.0)
Share of profit (loss) of associates	0.2	(1.0)	(1.6)
Other non-operating expenses, net	(0.8)	(1.7)	(0.9)
Profit before tax	9.3	8.5	9.7
Income tax expense	(1.0)	(3.0)	(2.5)
Profit from continuing operations	8.3	5.5	7.2
Profit (loss) from discontinued operations	(0.7)	10.1	—
Profit for the year	7.6%	15.6%	7.2%
Attributable to:			
Equity holders of the Company—continuing operations	10.0%	5.5%	7.2%
Equity holders of the Company—discontinued operations	(0.7)	10.1	—
Predecessors' interests	(1.7)	—	—
	7.6%	15.6%	7.2%

Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

Revenue. Our revenue increased by NT\$539 million, or 3%, to NT\$18,480 million (US\$604 million) in 2018 from NT\$17,941 million in 2017.

Revenue from test services for memory and logic/mixed-signal semiconductors decreased by NT\$48 million, or 1%, to NT\$4,790 million (US\$157 million) in 2018 from NT\$4,838 million in 2017. Revenue from test services for memory semiconductors increased by NT\$17 million, or 1%, to NT\$3,988 million (US\$131 million) in 2018 from NT\$3,971 million in 2017, principally due to the increased average selling prices for our services. Revenue for test services for logic/mixed-signal semiconductors decreased by NT\$65 million, or 8%, to NT\$802 million (US\$26 million) in 2018 from NT\$867 million in 2017, principally due to the decreased average selling prices for our services.

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Revenue from assembly services for memory and logic/mixed-signal semiconductors decreased by NT\$580 million, or 11%, to NT\$4,679 million (US\$153 million) in 2018 from NT\$5,259 million in 2017. Revenue from assembly services for memory semiconductors decreased by NT\$455 million, or 10%, to NT\$3,897 million (US\$127 million) in 2018 from NT\$4,352 million in 2017, primarily as a result of the decreased average selling prices for our services and customer demand. Revenue from assembly services for logic/mixed-signal semiconductors decreased by NT\$124 million, or 14%, to NT\$783 million (US\$26 million) in 2018 from NT\$907 million in 2017, primarily as a result of the decreased average selling prices for our services and customer demand.

Revenue from LCD and other display panel driver semiconductor assembly and test services increased by NT\$905 million, or 19%, to NT\$5,695 million (US\$186 million) in 2018 from NT\$4,790 million in 2017. This increase was principally as a result of an increase in average selling prices for our services and customer demand for LCD and other display panel products.

Revenue from bumping services increased by NT\$262 million, or 9%, to NT\$3,316 million (US\$108 million) in 2018 from NT\$3,054 million in 2017. This increase was principally due to the increased average selling prices for our services and customer demand.

See “— Cost of Revenue and Gross Profit” for more information concerning our assembly and test capacity utilization rates and the impact on our revenue, gross profit and profitability from any increases or decreases in our capacity utilization rate.

Cost of Revenue and Gross Profit. Cost of revenue increased by NT\$346 million, or 2%, to NT\$15,050 million (US\$492 million) in 2018 from NT\$14,704 million in 2017, primarily due to the increase of depreciation expenses and reversal of inventory impairment loss of NT\$474 million (US\$15 million) and NT\$88 million (US\$3 million), respectively, and partially offset by the decrease of direct labor expenses and employee benefit expenses of NT\$91 million (US\$3 million) and NT\$101 million (US\$3 million), respectively.

Our gross profit increased to NT\$3,430 million (US\$112 million) in 2018 from NT\$3,237 million in 2017. Our gross margin was 18.6% in 2018, compared to 18.0% in 2017.

Our gross profit margin for test services for memory and logic/mixed-signal semiconductors decreased to 33.7% in 2018 from 35.8% in 2017, primarily due to the decrease in revenue resulted from the decreased average selling prices for our services.

Our gross profit margin for assembly services for memory and logic/mixed-signal semiconductors decreased to 3.2% in 2018 from 5.0% in 2017, primarily due to the decrease in revenue resulted from the decreased average selling prices for our services and customer demand.

Our gross profit margin for LCD and other display panel driver semiconductor assembly and test services increased to 27.2% in 2018 from 25.5% in 2017, primarily due to the increase in revenue resulted from the increased average selling prices for our services and customer demand.

Our gross profit margin for bumping services increased to 3.7% in 2018 from 0.6% in 2017, primarily due to the increase in revenue resulted from the increased average selling prices for our services and customer demand.

Research and Development Expenses. Research and development expenses decreased by NT\$47 million, or 5%, to NT\$939 million (US\$31 million) in 2018 from NT\$986 million in 2017, primarily due to the decrease of employee benefit expenses and R&D material expense.

Sales and Marketing Expenses. Sales and marketing expenses decreased by NT\$11 million, or 17%, to NT\$53 million (US\$2 million) in 2018 from NT\$64 million in 2017, primarily due to the decrease of employee benefit expenses, freight-out expense and commission expense.

General and Administrative Expenses. General and administrative expenses decreased by NT\$155 million, or 24%, to NT\$485 million (US\$16 million) in 2018 from NT\$640 million in 2017, primarily due to the decrease of employee benefit expenses and professional service fee.

Other Operating Income (Expenses), Net. Other operating income decreased by NT\$545 million, or 79%, to NT\$148 million (US\$5 million) in 2018 from NT\$693 million in 2017, primarily due to the decrease of insurance compensation income of NT\$487 million (US\$16 million) and gain on disposal of property, plant and equipment of NT\$119 million (US\$4 million).

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Finance Costs. Finance costs decreased by NT\$27 million, or 12%, to NT\$190 million (US\$6 million) in 2018 from NT\$217 million in 2017. This change was primarily due to the decrease of interest expense from bank loans by NT\$38 million (US\$1 million) and partially offset by the increase of financial cost of bank loans by NT\$11 million (US\$359 thousand).

Share of profit (loss) of associates. Share of loss of associates increased by NT\$121 million, or 67%, to NT\$300 million (US\$10 million) in 2018 from NT\$179 million in 2017. This change was primarily due to the increase of share of loss of associates of Unimos Shanghai by NT\$162 million (US\$5 million) and partially offset by the increase of share of profit of associates of JMC by NT\$41 million (US\$1 million).

Other Non-Operating Income (Expenses), Net. Other non-operating expense decreased by NT\$484 million, or 156%, to other non-operating income of NT\$173 million (US\$6 million) in 2018 from other non-operating expense of NT\$311 million in 2017. This change was primarily due to the decrease of foreign exchange losses by NT\$512 million (US\$17 million) and partially offset by the decrease of gain on disposal of long-term investment of associates by NT\$17 million (US\$1 million) and reimbursement of ADSs service charge by NT\$10 million (US\$327 thousand).

Profit before Income Tax. As a result of the foregoing, profit before income tax increased by 16% to NT\$1,782 million (US\$58 million) in 2018 from NT\$1,532 million in 2017.

Income Tax Expense. We had an income tax expense of NT\$457 million (US\$15 million) in 2018 compared to income tax expense of NT\$551 million for 2017, primarily due to the decrease of the income tax expense from 10% tax on unappropriated earnings and partially offset by the increase of income tax of profit before tax.

Profit for the Year Attributable to Equity Holders of the Company. As a result of the foregoing operations as well as increase in profit from discontinued operations, the profit for the year attributable to the Company was NT\$1,326 million (US\$43 million) in 2018, compared to NT\$2,797 million in 2017.

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

Revenue. Our revenue decreased by NT\$447 million, or 2%, to NT\$17,941 million in 2017 from NT\$18,388 million in 2016.

Revenue from test services for memory and logic/mixed-signal semiconductors increased by NT\$251 million, or 5%, to NT\$4,838 million in 2017 from NT\$4,587 million in 2016. Revenue from test services for memory semiconductors increased by NT\$351 million, or 10%, to NT\$3,971 million in 2017 from NT\$3,620 million in 2016, principally due to the increased capacity utilization rate resulting from the higher customer demand. Revenue for test services for logic/mixed-signal semiconductors decreased by NT\$100 million, or 10%, to NT\$867 million in 2017 from NT\$967 million in 2016, principally due to the decreased capacity utilization rate resulting from the lower customer demand.

Revenue from assembly services for memory and logic/mixed-signal semiconductors decreased by NT\$622 million, or 11%, to NT\$5,259 million in 2017 from NT\$5,881 million in 2016. Revenue from assembly services for memory semiconductors decreased by NT\$932 million, or 18%, to NT\$4,352 million in 2017 from NT\$5,284 million in 2016, primarily as a result of the decreased average selling prices for our services and customer demand. Revenue from assembly services for logic/mixed-signal semiconductors increased by NT\$310 million, or 52%, to NT\$907 million in 2017 from NT\$597 million in 2016, primarily as a result of the increased capacity utilization rate resulting from the higher customer demand.

Revenue from LCD and other display panel driver semiconductor assembly and test services decreased by NT\$131 million, or 3%, to NT\$4,790 million in 2017 from NT\$4,921 million in 2016. This decrease was principally as a result of a decrease in average selling price for LCD and other display panel products.

Revenue from bumping services increased by NT\$55 million, or 2%, to NT\$3,054 million in 2017 from NT\$2,999 million in 2016. This increase was principally due to the increased average selling prices for our services and customer demand.

See “— Cost of Revenue and Gross Profit” for more information concerning our assembly and test capacity utilization rates and the impact on our revenue, gross profit and profitability from any increases or decreases in our capacity utilization rate.

Cost of Revenue and Gross Profit. Cost of revenue decreased by NT\$42 million, or 1%, to NT\$14,704 million in 2017 from NT\$14,746 million in 2016, primarily due to the decrease of direct material expenses, depreciation expenses and expendable equipment of NT\$310 million, NT\$194 million and NT\$352 million, respectively, and partially offset by the increase of direct labor expenses, employee benefit expenses, maintenance and repair, operating supplies, inventory supplies and subcontract fee of NT\$359 million, NT\$206 million, NT\$68 million, NT\$69 million, NT\$65 million and NT\$41 million, respectively.

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Our gross profit decreased to NT\$3,237 million in 2017 from NT\$3,642 million in 2016. Our gross margin was 18.0% in 2017, compared to 19.8% in 2016.

Our gross profit margin for test services for memory and logic/mixed-signal semiconductors decreased to 35.8% in 2017 from 36.8% in 2016, primarily due to the decreased sales of higher margin logic/mixed-signal semiconductors test services.

Our gross profit margin for assembly services for memory and logic/mixed-signal semiconductors decreased to 5.0% in 2017 from 11.3% in 2016, primarily due to the decrease in revenue resulted from the decreased average selling prices for our services.

Our gross profit margin for LCD and other display panel driver semiconductor assembly and test services decreased to 25.5% in 2017 from 26.7% in 2016, primarily due to the decrease in revenue resulted from the decreased average selling prices for our services.

Our gross profit margin for bumping services increased to 0.6% in 2017 from -0.7% in 2016, primarily due to the increase in revenue resulted from the increased average selling prices for our services and customer demand.

Research and Development Expenses. Research and development expenses increased by NT\$147 million, or 18%, to NT\$986 million in 2017 from NT\$839 million in 2016, primarily due to the increase of employee benefit expenses resulted from the increase of employees.

Sales and Marketing Expenses. Sales and marketing expenses decreased by NT\$9 million, or 12%, to NT\$64 million in 2017 from NT\$73 million in 2016, primarily due to the decrease of employee benefit expenses.

General and Administrative Expenses. General and administrative expenses decreased by NT\$182 million, or 22%, to NT\$640 million in 2017 from NT\$822 million in 2016, primarily due to the decrease of employee benefit expenses and professional service fee resulted from the Merger.

Other Operating Income (Expenses), Net. Other operating income increased by NT\$603 million, or 670%, to NT\$693 million in 2017 from NT\$90 million in 2016, primarily due to the increase of insurance compensation income of NT\$480 million and gain on disposal of property, plant and equipment of NT\$130 million.

Finance Costs. Finance costs increased by NT\$38 million, or 21%, to NT\$217 million in 2017 from NT\$179 million in 2016. This change was primarily due to the increase of interest expense from bank loans and leasing by NT\$46 million and partially offset by the decrease of financial cost of bank loans by NT\$8 million.

Share of profit (loss) of associates. Share of income of associates decreased by NT\$208 million, or 721%, to share of loss of associates of NT\$179 million in 2017 from share of income of associates of NT\$29 million in 2016. This change was primarily due to the increase of share of loss of associates of Unimos Shanghai by NT\$180 million and decrease of share of profit of associates of JMC by NT\$28 million.

Other Non-Operating Income (Expenses), Net. Other non-operating expense increased by NT\$163 million, or 110%, to NT\$311 million in 2017 from NT\$148 million in 2016. This change was primarily due to the increase of foreign exchange losses by NT\$224 million and partially offset by the increase of gain on disposal of long-term investment of associates by NT\$17 million, reimbursement of ADSs service charge by NT\$24 million and interest income by NT\$15 million.

Profit before Income Tax. As a result of the foregoing, profit before income tax decreased by 10% to NT\$1,532 million in 2017 from NT\$1,700 million in 2016.

Income Tax Expense. We had an income tax expense of NT\$551 million in 2017 compared to income tax expense of NT\$177 million for 2016, primarily due to the income tax expense of NT\$247 million in 2017 from 10% tax on unappropriated earnings and the tax benefit of NT\$175 million in 2016 from reversing the 10% tax on respective unappropriated earnings due to the capital reorganization.

Profit for the Year Attributable to Equity Holders of the Company. As a result of the foregoing operations as well as increase in profit from discontinued operations, the profit for the year attributable to the Company was NT\$2,797 million in 2017, compared to NT\$1,707 million in 2016.

Critical Accounting Policies

We prepare our consolidated financial statements in conformity with the IFRSs. Under the IFRSs, we are required to make certain estimates, judgments and assumptions about matters that are highly uncertain at the time those estimates, judgments and assumptions are made, and our financial condition or results of operations may be materially impacted if we use different but nonetheless reasonable estimates, judgments or assumptions about those matters for that particular period or if we change our estimates, judgments or assumptions from period to period.

Under the IFRSs, the significant accounting policies are set forth in Note 2 to our consolidated financial statements contained in this Annual Report on Form 20-F. The significant accounting policies that require us to make estimates and assumptions about the effect of matters that are inherently uncertain are discussed below.

Revenue recognition

We recognize revenue from services based on the progress towards completion of performance obligation during the service period. The progress towards completion on assembly services, services for LCDD and Bumping are measured by the actual input costs relative to estimate total expected input costs. The progress towards completion on testing services is measured by the actual incurred testing volume comparing to planned total testing volume. We believe that aforementioned methods are the most appropriate manner to measure the satisfaction of performance obligation to customers because the input costs incurred to assembly and testing volume completed in testing services are based on customer's specification and not linear over the duration of these services.

We estimate sales refund liabilities for sale allowance based on historical results and other known factors. Provisions for such liabilities are recorded as a deduction item to sales revenues when the sales are recognized. We reassess the reasonableness of estimates of discounts and returns periodically. As of December 31, 2017 and 2018, the ending balances for current refund liabilities were NT\$70 million and NT\$33 million (US\$1 million), respectively.

Provisions for deficiency compensation

We are primarily providing high-integration and high-precision integrated circuit of the packaging and testing services. In cases of deficiencies in the assembly and testing services provided, we have to clarify the reason for deficiencies and attribution of responsibility. We follows the guidance of IAS 37 "Provisions, Contingent Liabilities and Contingent Assets" to determine provisions for deficiency compensation. Since the timing and amount of these provisions are based on assumptions and estimates it requires management to make critical judgments. As of December 31, 2017 and 2018, the ending balances for current provision for deficiency compensation were NT\$57 million and NT\$ 29 million (US\$1 million), respectively.

Impairment of receivables

We initially applied IFRS 9 on January 1, 2018 and recorded loss allowance base on expected credit loss. For the customer that we have reason to believe may have an inability to meet its financial obligations or past due over 90 days, we conduct an individual examination and use loss rate methodology to record a specific reserve. For the customers other than this, we also provide a reserve for receivables based upon the forecastability of business monitoring indicators to adjust the loss rate. As of December 31, 2018, we provided nil for the first type of reserve and NT\$2 million (US\$75thousand) for the second type of reserve.

The loss allowance we set aside for receivables was NT\$87 thousand as of December 2016, nil as of December 31, 2017 and NT\$2 million (US\$75 thousand) as of December 31, 2018. The allowances as of December 31, 2016, 2017 and 2018 represented 0.002%, nil and 0.048%, respectively, of our accounts receivable as of those dates. The reversal and allowance in 2017 and 2018 reflected an enlargement and reduction of NT\$87 thousand and NT\$349 thousand (US\$11 thousand), respectively, in accounts receivable that increased and decreased the sales and marketing expenses.

An increase in our loss allowance for receivables would increase our sales and marketing expenses, and decrease our current assets.

Depreciation of property, plant and equipment

Property, plant and equipment are depreciated on a straight-line basis over their estimated economic useful lives. The determination of the useful lives involves management's estimation. The Group assesses annually the useful life of the property, plant and equipment and if the expectation differs from the original estimate, such a difference may impact the depreciation in the year when the estimate is changed and the future period.

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By considering the Company's experience on using similar property, plant and equipment in prior periods as well as by referring to the experience from peer industries, on November 10, 2016, the Board of Directors approved to change the estimated useful lives of certain properties from 11 years to 16 years and certain equipment from 2~6 years to 2~8 years effectively from November 1, 2016, in order to better reflect economic benefits from consumption of those property and equipment.

Deferred Tax Assets

Deferred tax assets are recognized for unused tax losses, temporary differences, and tax credit to the extent that it is probable that taxable profit will be available against which the losses can be utilized. Significant management judgment is required to determine that amount of deferred tax assets that can be recognized, based upon the likely timing and the level of future taxable profits together with future tax planning strategies.

The Company has not recognized deductible and taxable temporary differences associated with investment as deferred tax assets. As of December 31, 2016, 2017 and 2018, the amounts of deductible temporary differences unrecognized as deferred tax assets were NT\$535 million, NT\$29 million and nil, respectively.

As of December 31, 2016, 2017 and 2018, the ending balances for deferred tax assets were NT\$250 million, NT\$212 million and NT\$227 million (US\$7 million), respectively.

Deferred Tax Liabilities

Deferred tax liabilities are recognized for all taxable temporary differences, except when the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and in respect of taxable temporary differences associated with investments in subsidiaries, associates and joint ventures, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

The Company has not recognized taxable temporary differences associated with investment as deferred tax liabilities. As of December 31, 2016, 2017 and 2018, the amounts of taxable temporary differences unrecognized as deferred tax liabilities were nil, NT\$921 thousand and NT\$495 million (US\$16 million), respectively.

As of December 31, 2016, 2017 and 2018, the ending balances for deferred tax liabilities were NT\$93 million, NT\$174 million and NT\$309 million (US\$10 million), respectively.

Impairment of Non-Financial Assets

Impairment exists when the carrying value of an asset or cash generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The fair value less costs of disposal calculation is based on available data from binding sales transactions, conducted at arm's length, for similar assets or observable market prices less incremental costs for disposing of the asset. The value in use calculation is based on a discounted cash flow ("DCF") model. The cash flows are derived from the budget for the next five years and do not include restructuring activities that the Group is not yet committed to or significant future investments that will enhance the asset's performance of the cash generating unit being tested. The recoverable amount is sensitive to the discount rate used for the DCF model as well as the expected future cash-inflows and the growth rate used for the extrapolation purposes.

In determining whether any impairment charges were necessary for the property, plant and equipment and other non-current assets for the year ended December 31, 2018, we assumed that the semiconductor industry will continue its growth in the next few years. Based upon our assumption of growth in the semiconductor industry and our other assumptions in our internal budget, for the purpose of determining whether any impairment charges are necessary for the year ended December 31, 2018, an impairment loss of nil and nil were recognized with respect to property, plant and equipment and other non-current assets.

While we believe that our estimates of future cash flows are reasonable, any changes in these estimates based on changed economic conditions or business strategies could result in significant impairment changes in future periods.

Defined Benefit Plans

The cost of the defined benefit pension plan and post-employment benefits and the present value of the pension obligation are determined using actuarial valuations. An actuarial valuation involves making various assumptions that may differ from actual developments in the future. These include the determination of the discount rate, future salary increases, mortality rates and future pension increases. Due to the complexities involved in the valuation and its long-term nature, a defined benefit obligation is highly sensitive to change in these assumptions. All assumptions are reviewed at each reporting date. Further details are disclosed in Note 25 to our consolidated financial statements contained in this Annual Report on Form 20-F.

Senior Management's Discussion with the Audit Committee

Our management has discussed the critical accounting policies described above with the audit committee of our board of directors and the audit committee has reviewed our disclosure relating to the critical accounting policies in this section.

Impact of Foreign Currency Fluctuations and Governmental or Political Factors

For a discussion of the impact of foreign currency fluctuations and governmental economics, fiscal, monetary or political policies or factors that may directly or indirectly impact us, see "Item 3. Key Information—Risks Factors—Risks Relating to Our Business—Fluctuations in exchange rates could result in foreign exchange losses" and "Item 3. Key Information—Risks Factors—Risks Relating to Countries in Which We Conduct Operations".

Liquidity and Capital Resources

Since our inception, we have funded our operations and growth primarily through the issuance of equity, a mixture of short- and long-term bank loans and cash flow from operations. As of December 31, 2018, our primary sources of liquidity were cash and cash equivalents of NT\$4,643 million (US\$152 million), short-term bank loans of NT\$6,007 million (US\$196 million) available to us in undrawn facilities, which have expired or will expire from February 2019 to November 2019, and long-term bank loans of NT\$1,800 million (US\$59 million) available to us in undrawn facilities, which will expire in May 2023. We have taken the following steps to meet our liquidity, capital spending and other capital needs.

In May 2018, the Company obtained a syndicated loan facility from banks in Taiwan in the amount of NT\$12,000 million for a term of five years, which was used to repay the existing debt of financial institutions and broaden the Company's working capital. See "Item 3. Key Information—Risk Factors—Risks Relating to Our Business—Our significant amount of indebtedness and interest expense will limit our cash flow and could adversely affect our operations" for additional information.

In order to adjust capital structure and increase returns of equity, on June 26, 2018, a capital reduction plan (the "2018 Capital Reduction Plan") was resolved at shareholders' meeting, under which the Company reduced its share capital by approximately 15% on November 2, 2018. As a result, approximately 15% of the total number of issued shares was canceled, proportionately to the shareholding of each Shareholder. The issued shares of the Company include (i) the issued and outstanding shares not held in the ADS deposit facility, approximately 15% of which were canceled, and cash was distributed to the holders of these shares, (ii) the issued and outstanding shares held in the ADS deposit facility, approximately 15% of which were canceled, and accordingly, approximately 15% of the ADSs representing these shares were canceled, and cash was distributed to holders of ADSs representing these canceled shares, (iii) issued shares not outstanding that are treasury stock, approximately 15% of which were canceled, and no cash was distributed with respect to these shares, and (iv) issued shares not outstanding acquired by the Company pursuant to the restricted share agreement with the employees, approximately 15% of which were canceled, and no cash was distributed with respect to these shares, in each case of (i)-(iv), in accordance with the 2018 Capital Reduction Plan. The ratio between one ADS and the number of underlying Common Shares remain unchanged under the 2018 Capital Reduction Plan. The record date of the 2018 Capital Reduction Plan was fixed on August 15, 2018. Each holder of the outstanding Common Shares received an amount calculated by approximately NT\$1.5 per common share and each holder of ADS received an amount calculated by approximately NT\$30 per ADS under the 2018 Capital Reduction Plan.

Under the 2018 Capital Reduction Plan, the Company's share capital was reduced by NT\$1,329,445,590, and 132,944,559 issued Common Shares and 974,013 issued and outstanding ADSs were canceled. As of March 31, 2019, we have a total of 752,834,734 issued Common Shares and 4,995,376 issued and outstanding ADSs.

Since November 1, 2016, when the Company first issued ADSs, the total number of issued and outstanding Company ADSs has decreased by 20,624,891 ADSs, representing approximately 81% of the total number of issued and outstanding ADSs first issued, as a result of ADS holders surrendering their ADSs to the depository for cancellation, withdrawing the underlying shares and 2018 Capital Reduction Plan from the deposit facility, pursuant to the Company's deposit agreement with the depository.

Liquidity

The following table sets forth our cash flows with respect to operating activities, investing activities, financing activities and the effect of exchange rate changes on cash for the periods indicated.

	Year ended December 31,			
	2016	2017	2018	2018
	NT\$	NT\$	NT\$	US\$
	(in millions)			
Net cash generated from (used in):				
Operating activities	\$ 3,688.0	\$ 4,157.3	\$ 4,129.2	\$ 134.9
Investing activities	(4,556.7)	(3,493.4)	(5,129.3)	(167.6)
Financing activities	(3,223.9)	(550.8)	(2,400.4)	(78.4)
Net increase (decrease) in cash and cash equivalents	<u>\$ (4,092.6)</u>	<u>\$ 113.1</u>	<u>\$ (3,400.5)</u>	<u>\$ (111.1)</u>

Net Cash Generated from Operating Activities

Net cash generated from operating activities totaled NT\$4,129 million (US\$135 million) in 2018, compared to NT\$4,157 million in 2017. Net cash generated from operating activities was positively impacted by a profit before income tax of NT\$1,782 million (US\$58 million) with depreciation expenses of NT\$3,377 million (US\$110 million) in 2018 compared to a profit before income tax (including discontinued operations) of NT\$3,347 million with depreciation expenses of NT\$2,899 million in 2017. The decrease in net cash generated from operating activities was primarily due to an increase of accounts and notes receivable of NT\$734 million (US\$24 million) in 2018 compared to a decrease of accounts and notes receivable of NT\$128 million in 2017, a decrease of other payables of NT\$302 million (US\$10 million) in 2018 compared to an increase of other payables of NT\$439 million in 2017, the decrease of share-based payments which was NT\$41 million (US\$1 million) in 2018 compared to NT\$123 million in 2017 and a decrease of prepayments of NT\$47 million (US\$2 million) in 2018 compared to a decrease of prepayments of NT\$127 million in 2017 and partially offset by the decrease of gain on disposal of a subsidiary which was nil in 2018 compared to NT\$1,843 million in 2017, gain on disposal of property, plant and equipment which was NT\$14 million (US\$1 million) in 2018 compared to NT\$133 million in 2017, insurance compensation income which was NT\$147 thousand (US\$5 thousand) in 2018 compared to NT\$487 million in 2017, income tax payment which was NT\$119 million (US\$4 million) in 2018 compared to NT\$388 million in 2017 and the increase of share of loss of associates which was NT\$300 million (US\$10 million) in 2018 compared to NT\$179 million in 2017.

Net cash generated from operating activities totaled NT\$4,157 million in 2017, compared to NT\$3,688 million in 2016. Net cash generated from operating activities was positively impacted by a profit before income tax (including discontinued operations) of NT\$3,347 million with depreciation expenses of NT\$2,899 million in 2017 compared to a profit before income tax (including discontinued operations) of NT\$1,578 million with depreciation expenses of NT\$3,228 million in 2016. The increase in net cash generated from operating activities was primarily due to a decrease of accounts and notes receivable of NT\$128 million in 2017 compared to an increase of accounts and notes receivable of NT\$480 million in 2016, an increase of other payables of NT\$439 million in 2017 compared to a decrease of other payables of NT\$250 million in 2016 and partially offset by the increase of gain on disposal of a subsidiary which was NT\$1,843 million in 2017 compared to nil in 2016 and insurance compensation income which was NT\$487 million in 2017 compared to nil in 2016.

Net Cash Used in Investing Activities

Net cash used in investing activities totaled NT\$5,129 million (US\$168 million) in 2018, compared to NT\$3,493 million in 2017. The increase in net cash used in investing activities primarily resulted from the decrease in net cash flow from disposal of a subsidiary which was nil in 2018, compared to NT\$1,781 million in 2017.

Net cash used in investing activities totaled NT\$3,493 million in 2017, compared to NT\$4,557 million in 2016. The decrease in net cash used in investing activities primarily resulted from the increase in net cash flow from disposal of a subsidiary which was NT\$1,781 million in 2017, compared to nil in 2016, proceeds from insurance compensation which was NT\$487 million in 2017, compared to nil in 2016 and proceeds from disposal of property, plant and equipment which was NT\$307 million in 2017, compared to NT\$59 million in 2016 and partially offset by the increase in acquisition of investment in associate which was NT\$1,373 million in 2017, compared to nil in 2016.

Net Cash Used in Financing Activities

Net cash used in financing activities totaled NT\$2,400 million (US\$78 million) in 2018, compared to net cash used in financing activities totaled NT\$551 million in 2017. The increase in net cash used in financing activities was primarily the result of the net payments of short-term bank loans of NT\$969 million (US\$32 million) in 2018, compared to net proceeds of short-term bank loans of NT\$1,282 million in 2017 and the payments on capital reduction which was NT\$1,284 million (US\$42 million) in 2018, compared to nil in 2017 and partially offset by the net proceeds of long-term bank loans of NT\$110 million (US\$4 million) in 2018, compared to net payments of long-term bank loans of NT\$976 million in 2017 and the decrease in cash distribution of NT\$257 million (US\$8 million) in 2018, compared to NT\$857 million in 2017.

Net cash used in financing activities totaled NT\$551 million in 2017, compared to net cash used in financing activities totaled NT\$3,224 million in 2016. The decrease in net cash used in financing activities was primarily the result of the net proceeds of short-term bank loans of NT\$1,282 million in 2017, compared to net payment on short-term bank loans of NT\$1,149 million in 2016, the payments on repurchase of shares of nil in 2017, compared to NT\$1,008 million in 2016, the payments in cash distribution of NT\$857 million in 2017, compared to NT\$1,793 million in 2016 and the payments on capital reorganization which was nil in 2017, compared to NT\$3,342 million in 2016 and partially offset by the net payments of long-term bank loans of NT\$976 million in 2017, compared to net proceeds of long-term bank loans of NT\$4,359 million in 2016.

Capital Resources

Capital expenditures in 2016 were funded by NT\$3,688 million in cash flows from operating activities. Capital expenditures in 2017 were funded by NT\$4,157 million. Capital expenditures in 2018 were funded by NT\$4,129 million (US\$135 million) in cash flows from operating activities.

Steps taken with respect to generating additional working capital and to saving cash are further discussed under “—Liquidity and Capital Resources”.

Loans

As of December 31, 2018, we had long-term bank loans of NT\$9,790 million (US\$320 million) (including current portions of such long-term bank loans of NT\$747 million (US\$24 million)). As of December 31, 2018, NT\$8,022 million (US\$262 million) of our long-term bank loans were collateralized by land, buildings and equipment. Our long-term bank loans were floating rate loans with a rate of 1.7895% as of December 31, 2018, repayable semi-annually from November 2018 to May 2023.

We had entered into the following syndicated loan and long-term loans facilities:

- On July 14, 2011, we obtained a syndicated loan facility from banks in Taiwan in the amount of NT\$8,410 million separated into two parts with its respective term of four years and five years. This loan facility is secured by existing land and buildings and equipment. This loan facility was fully drawn in 2011 and fully repaid in July 2014.
- On May 24, 2013, we obtained a bank loan facility from a bank in Taiwan in the amount of NT\$400 million for a term of two years. This loan facility is unsecured credit for us, drawn amount limited to NT\$600 million in total long-term loan and short-term loan drawn. This loan facility has expired in May 2014.
- On July 2, 2014, we obtained a syndicated loan facility from banks in Taiwan in the amount of NT\$10,000 million in a term of five years. This loan facility is secured by existing land and buildings and equipment. This loan facility was fully drawn in 2016 and fully repaid in June 2016.
- On May 16, 2016, we obtained a syndicated loan from banks in Taiwan in the amount of NT\$13,200 million with a term of five years. This loan facility is secured by existing land and buildings and equipment. This loan facility was drawn of NT\$10,800 million and fully repaid in May 2018.
- On May 15, 2018, we obtained a syndicated loan from banks in Taiwan in the amount of NT\$12,000 million with a term of five years. This loan facility is secured by existing land and buildings and equipment. As of the date of this Annual Report on Form 20-F, this loan facility was drawn of NT\$10,200 million.

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Certain of our loan agreements and indentures contain covenants that, if violated, could result in the obligations under these agreements becoming due prior to the originally scheduled maturity dates. These covenants include financial covenants that require us to:

- maintain current assets to current liabilities ratio above 1:1;
- maintain total indebtedness to shareholders' equity ratio below 1.4:1;
- maintain total indebtedness to shareholders' equity (excluding intangible assets) ratio below 1.5:1;
- maintain the profit before interest, taxes, depreciation and amortization to gross interest expense ratio above 2.5:1.

We were in compliance with these financial covenants ratio requirements for 2014 to 2018.

In addition, a substantial portion of our short-term and long-term borrowings may be subject to repayment upon a material deterioration of our financial condition, results of operations or our ability to perform under the loan agreements.

Set forth below are the maturities of our long-term bank loans outstanding as of December 31, 2018:

	As of	
	December 31, 2018	
	NT\$	US\$
	(in millions)	
During 2019	\$ 748	\$ 24
During 2020	754	25
During 2021	754	25
During 2022	754	25
During 2023 and onwards	6,780	221
	<u>\$ 9,790</u>	<u>\$ 320</u>

As of December 31, 2018, certain of our property, plant and equipment and other financial assets-non current with an aggregate net book value of NT\$9,672 million (US\$316 million) and NT\$68 million (US\$2 million), respectively, were pledged as collateral mainly for long-term bank loans and leases.

Our unused credit lines for short-term loans, as of December 31, 2018, totaled NT\$6,007 million (US\$196 million), which have expired or will expire from February 2019 to November 2019. As of December 31, 2018, our unused long-term credit facilities totaled NT\$1,800 million (US\$59 million) which will expire in May 2023.

As of December 31, 2018, we had no short-term loan outstanding.

We believe our current cash and cash equivalents, cash flows from operations and available credit facilities will be sufficient to meet our capital spending, commitments and other capital needs through the one year after the issuance date of financial statements. There can be no assurance regarding these matters, however, considering prevailing global economic conditions which continue to have a negative impact on our ability to accurately forecast our revenues, results of operations and cash position. See "Item 3. Key Information—Risk Factors—Risks Relating to Our Business—Our significant amount of indebtedness and interest expense will limit our cash flow and could adversely affect our operations".

Research and development, patents and licenses

See the discussion under "Item 4. Information on the Company—Research and Development".

Trend Information

See the discussion under "Item 4. Information on the Company—Our Structure and History", "Item 4. Information on the Company—Industry Background" and "Item 4. Information on the Company—Competition".

Off-Balance Sheet Arrangements

As of December 31, 2018, we had no off-balance sheet arrangements.

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Taxation

The Company is entitled to tax incentives generally available to Taiwan companies under the ROC Statute for Industrial Innovation, a profit-seeking enterprise may deduct up to (i) 15% of its research and development expenditures from its income tax payable for the fiscal year in which these expenditures are incurred; or (ii) 10% of its research and development expenditures from its income tax payable for the fiscal year in which these expenditures are incurred or the following two years. However, the deduction may not exceed 30% of the income tax payable for that fiscal year. In 2016, 2017 and 2018, tax credits resulted in tax savings for the Company of approximately nil, NT\$7 million and NT\$7 million (US\$229 thousand), respectively.

Profit for the year generated by the Company after January 1, 1998, which is not distributed in the year following the year the profit was generated, is subject to additional income tax at the rate of 10%. If that profit for the year is subsequently distributed, the additional income tax previously paid on that income is credited against the amount of withholding tax payable by shareholders, who are not individuals or entities of the Republic of China (for taxation purposes), in connection with the distribution.

The ROC government enacted the alternative minimum tax ("AMT") Act that became effective on January 1, 2006. The AMT imposed under the AMT Act is a supplemental tax which is payable if the income tax payable pursuant to the ROC Income Tax Act is below the minimum amount prescribed under the AMT Act. The taxable income for calculating the AMT includes most income that is exempted from income tax under various legislations, such as tax holidays and investment tax credits. The AMT rate for business entities is 12%. However, the AMT Act grandfathered certain tax exemptions and tax credits granted prior to the enactment of the AMT. In 2018, AMT Act had no effects on the tax expenses of the Company since the income tax payable is above the minimum amount prescribed under the AMT Act.

The amendment to the Income Tax Act has been approved and promulgated in February 2018 to raise the profit-seeking enterprise income tax rate from 17% to 20%, decrease the tax rate on unappropriated retained earnings from 10% to 5%, and abandon the imputation tax credit account effective from fiscal year starting January 1, 2018.

Tabular Disclosure of Contractual Obligations and Commercial Commitments

The following table summarizes our contractual obligations and commitments as of December 31, 2018, or the periods indicated:

<u>Contractual Obligations</u>	<u>Payments Due by Period</u>				
	<u>Total</u> <u>NT\$</u>	<u>Less than</u> <u>1 year</u> <u>NT\$</u>	<u>2-3 years</u> <u>NT\$</u> <u>(in millions)</u>	<u>4-5 years</u> <u>NT\$</u>	<u>More than</u> <u>5 years</u> <u>NT\$</u>
Long-term bank loans ⁽¹⁾	\$10,477	\$ 927	\$ 1,815	\$ 7,735	\$ —
Lease obligations payable	18	18	—	—	—
Operating leases	320	69	73	67	111
Capital commitments	2,509	2,509	—	—	—
Total contractual cash obligations	<u>\$13,324</u>	<u>\$ 3,523</u>	<u>\$ 1,888</u>	<u>\$ 7,802</u>	<u>\$ 111</u>

Note:

(1) Includes interest payments. Assumes level of relevant interest rates remains at December 31, 2018, level throughout all relevant periods.

In addition to the commitments set forth in the contractual obligations table above, we have certain outstanding purchase orders relating to the procurement of raw materials for which there are no definite delivery dates or deadlines.

Item 6. Directors, Senior Management and Employees**Directors and Senior Management**

The number of directors must not be less than nine and must not be greater than eleven according to our articles of incorporation. Our board of directors currently comprises of nine directors (eight actually in office and one vacancy) who were elected by our shareholders. The term of office for directors is three years. Of our current eight directors, five are independent directors. The chairman of our board is appointed among the members of our board.

Pursuant to ROC Securities and Exchange Act, a public company is required to either establish an audit committee or to have supervisors. A public company's audit committee should be composed of all of its independent directors but not less than three, of which at least one member should have accounting or related financial management expertise, and the relevant provisions under the ROC Securities and Exchange Act, the ROC Company Act and other laws applicable to the supervisors are also applicable to the audit committee. We are also required to establish a compensation committee which must be composed of qualified independent members as defined under local law. The Company has established its audit committee and compensation committee.

Pursuant to the ROC Company Act, a person may serve as our director in his or her personal capacity or as the representative of another legal entity. A director who serves as the representative of a legal entity may be removed or replaced at any time at the discretion of that legal entity, and the replacement director may serve the remainder of the term of office of the replaced director. All of our current eight directors are served in his or her personal capacity.

The following table sets out the names of our directors and executive officers, their positions with our company and their ages as of March 31, 2019. The business address for our directors and executive officers is No. 1, R&D Road 1, Hsinchu Science Park, Hsinchu, Taiwan, and Republic of China.

<u>Name</u>	<u>Age</u>	<u>Position</u>	<u>Term Expires</u>
Shih-Jye Cheng	60	Chairman and Director/President	2019
Yu-Hu Liu	60	Director	2019
Wen-Ching Lin	62	Director	2019
Chin-Shyh Ou	61	Independent Director	2019
Tai-Haur Kuo	58	Independent Director	2019
Yuh-Fong Tang	64	Independent Director	2019
Kuei-Ann Wen	58	Independent Director	2019
Cho-Lien Chang	57	Independent Director	2019
Lafair Cho	56	Senior Executive Vice President/Chief Operating Officer	—
Silvia Su	48	Vice President, Finance and Accounting Management Center	—

Shih-Jye Cheng has served as a director and president of the Company since 1997 and the chairman of the Company since June 2003. He has been the vice chairman of Unimos Shanghai since February 2017. He is the sibling of President of ChipMOS USA. He also has been the director of the ChipMOS USA since its inception. He was the chairman of ThaiLin from 2002 to 2013, a director of Syntax-Brilliant Corporation from November 2005 to June 2008, the chairman of Unimos Shanghai from 2002 to June 2005, the chairman of CHANTEK ELECTRONIC CO., LTD. from 2002 to November 2005, the chairman of ChipMOS Logic TECHNOLOGIES INC. from January 2004 to November 2005, the chairman of Advanced Micro Chip Technology Co., Ltd. from 2003 to April 2004 and a director of Ultima Electronics Corp. from 2000 to June 2003. He was a division head of the back-end operation of Mosel from 1992 to 1997. Mr. Cheng has a master's degree in business administration from Saginaw Valley State University. Mr. Cheng was indicted by the Taipei District Prosecutor's Office for matters relating to the purchase by the Company and ThaiLin of certain repurchase notes in 2004. Mr. Cheng was found not guilty by the Taipei District Court on October 1, 2007 and by the High Court on September 3, 2013. The Taiwan High Court's Prosecutor's Office filed a petition for appeal against the High Court's decision on September 18, 2013. Mr. Cheng was confirmed not guilty by Taiwan's Supreme Court on August 7, 2014. The Supreme Court's ruling is not subject to appeal and the litigation closed.

Yu-Hu Liu has served as one of our directors since June 2013. Mr. Liu has been the supervisor of Siliconware Investment Co., Ltd. from June 2011 to March 2019 and supervisor of Yann Yuan Investment Co., Ltd. since 2015. He was supervisor and Vice President of Siliconware Precision from 2011 to 2013 and 2006 to 2011, respectively. Mr. Liu holds a master's degree from National United University.

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Wen-Ching Lin has served as one of our directors since May 2016. Mr. Lin has been the chairman of Yann Fong Investment Co., Ltd., since April 2000, the director and president since December 2015 and the chairman since August 2018 of Shi Kai Investment Co., Ltd., the president of Zhi Sheng Investment Co., Ltd. from December 2015 to June 2018 and the chairman of Yann Yuan Investment Co., Ltd. since July 2016. He was the supervisor of Siliconware Precision from June 2011 to June 2014. Mr. Lin graduated from Takushoku University.

Chin-Shyh Ou has served as one of our directors since June 2007. He was one of ChipMOS Bermuda's directors since June 2007 until ChipMOS Bermuda was merged with and into the Company. He also served as independent director and compensation member of Chi Hua Fitness Co., Ltd since May and August 2011 respectively. Mr. Ou joined the National Chengchi University as an associate professor in 1993, a professor from 1997 to January 2018 and a professor emeritus since February 2018. He has been a chair professor of the department of the Accounting and Information System at Asia University since August 2018. In 1998, he joined National Chung Cheng University as a professor and the chairman of the Department of Accounting. He led a project to establish the Graduate Institute of Accounting and Information Technology at National Chung Cheng University in 1999. Mr. Ou earned a master degree in Public Policy and Management from Carnegie Mellon University, and a Ph.D. degree in Business Administration (Accounting) from the University of Minnesota. Mr. Ou holds several professional licenses and qualifications, including U.S. Certified Public Accountant and Certified Internal Auditor.

Tai-Haur Kuo has served as one of our directors since June 2013. Mr. Kuo has been a professor of the department of Electrical Engineering at National Cheng Kung University since 1992. He has served as the independent director of Holtek Semiconductor Inc. since 2016. He was the director of ZillTek Technology from 2016 to March 2018. He holds a Ph.D. degree in Electrical Engineering from University of Maryland.

Yuh-Fong Tang has served as one of our directors since June 2013. Mr. Tang has served as the independent director of OPNET technologies Co., Ltd. since January 2015 and the consultant of Intelligent Silicon Solution Corporation since February 2018. He was the chairman and chief executive officer of Myson Century, Inc. from June 2012 to January 2018, the chairman of ZAVIO Inc. from December 2015 to January 2018, the chairman of compensation committee of Carnival Industrial Corporation from February 2012 to June 2017. He was the vice chairman of Pack-Link Management Corp. from August 2000 to 2007, the director of Yulon IT Solutions Inc. from 2007 to May 2013, the independent director of Zhengyuan Technology Co., Ltd. from 2007 to May 2013 and the Supervisor of TrueLight Corp. from January 2009 to November 2010. Mr. Tang holds a Ph.D. degree in Electrical Engineering from University of Illinois.

Kuei-Ann Wen has served as one of our directors since June 2015. Ms. Wen has been the professor of the department of Electronic Engineering and Institute of Electronics since 2012, the chief executive officer in strategic development office since 1989, and the vice dean of International College of Semiconductor Technology at National Chiao Tung University. She also served as the independent director of Xintec Inc. since 2016. Ms. Wen was the associate dean in the Office of Research and Development at National Chiao Tung University from 2011 to 2016. She holds a Ph.D. degree from Institute of Electrical Engineering at National Cheng Kung University.

Cho-Lien Chang has served as one of our directors since June 2015. She was the Company's vice president of LCD Driver production group from June 2004 to 2012, assistant vice president from 2002 to 2004 and manager from 2000 to 2002. Ms. Chang received a bachelor's degree from Chung Yuan Christian University.

Lafair Cho has served as the chief operating officer and senior executive vice president of the manufacturing operations center of the Company since January 2017. He has been the director of the ChipMOS USA since July 2003 and also has been the director of the ChipMOS BVI since October 2011. He was the executive vice president of the Company from June 2015 to January 2017. He also served as our vice president of the memory production group from July 2003 to August 2004 and as our director from October 2003 to June 2007. He served as a deputy assistant vice president of our IC testing division from April 2000 to December 2001 and as an assistant vice president of our IC testing division from January 2002 to January 2003. He also served as ThaiLin's chairman since June 17, 2013, the president since December 1, 2003 and a director since December 30, 2002 until ThaiLin was merged with and into the Company. He was vice president of ThaiLin from February 1, 2003 to November 30, 2003. He served as manager of production material control of Mosel from 1993 to 1997. He holds a master's degree in industrial management from National Cheng Kung University.

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Silvia Su has served as the vice president of finance and accounting management center of the Company since July 1, 2018. She has been the supervisor of Unimos Shanghai and the director of the ChipMOS BVI since February 2018. She also has been the director of ChipMOS USA since July 2013. She joined the Group from 2000. She was the director of finance division of ThaiLin from June 2013 till ThaiLin was merged with and into the Company in June 2015. She was the secretary of ChipMOS Bermuda till ChipMOS Bermuda was merged with and into the Company in October 2016. She holds a bachelor's degree in Accounting from National Chengchi University and a master's degree in Business Administration from the University of Leeds.

Share Ownership

The following table sets forth certain information as of March 31, 2019 with respect to our common shares owned by our directors and executive officers.

Name	Number of Common Shares Held	Percentage of Shares Issued	Number of Restricted Shares Held	Expiration Date of Restricted Shares
Shih-Jye Cheng	12,150,161	1.64%	—	Not applicable
Yu-Hu Liu	—	—	—	Not applicable
Wen-Ching Lin	3,399,862	0.46%	—	Not applicable
Chin-Shyh Ou	—	—	—	Not applicable
Tai-Haur Kuo	—	—	—	Not applicable
Yuh-Fong Tang	—	—	—	Not applicable
Kuei-Ann Wen	—	—	—	Not applicable
Cho-Lien Chang	—	—	—	Not applicable
Lafair Cho	101,990	0.02%	—	Not applicable
Silvia Su	96,041	0.01%	—	Not applicable

Note:

Indicate actual numbers held and/or including restricted shares vested within 60 days after March 31, 2019.

Compensation Committee

The aggregate compensation paid in 2018 to our directors and our executive officers, including cash and accrued pension payable upon retirement, was approximately NT\$80 million (US\$3 million).

We do not provide our directors with any benefits upon termination of employment. Our compensation committee currently consists of Mr. Tai-Haur Kuo, Mr. Yuh-Fong Tang and Mr. Chin-Shyh Ou, all of whom are independent directors. This committee reviews and recommends to our board of directors the compensation of all our directors and officers. The compensation committee is required to meet at least semi-annually.

Audit Committee

The audit committee currently consists of Mr. Chin-Shyh Ou, Mr. Tai-Haur Kuo, Mr. Yuh-Fong Tang, Ms. Kuei-Ann Wen and Ms. Cho-Lien Chang, all of whom are independent directors. Mr. Chin-Shyh Ou serves as a financial expert to the audit committee. Our audit committee charter was adopted on June 28, 2007 and amended on November 9, 2017. The audit committee is required to meet at least once every quarter. Our audit committee charter grants the audit committee the authority to conduct any investigation which it deems appropriate to fulfill its responsibilities. It has direct access to all our book, records, facilities, and personnel, as well as our registered public accountants. It has the authority to, among other things, appoint, terminate and approve all fees to be paid to our registered public accountants. The audit committee also has the authority to engage special legal, accounting, or other consultants it deems necessary in the performance of its duties. Beginning on January 1, 2007, the audit committee also assumed the responsibilities of supervisors pursuant to the ROC Securities and Exchange Act.

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Employees

The following table sets forth, as of the dates indicated, the number of our full-time employees serving in the functions indicated:

Function	As of December 31,			As of
	2016	2017	2018	March 31, 2019
General operations	3,203	3,003	3,160	3,067
Quality control	359	352	342	334
Engineering	1,447	1,332	1,445	1,440
Research and development	679	665	669	659
Sales, administration and finance	176	143	138	137
Others	350	310	251	252
Total	6,214	5,805	6,005	5,889

The following table sets forth, as of the dates indicated, a breakdown of the number of our full-time employees by geographic location:

Location	As of December 31,			As of
	2016	2017	2018	March 31, 2019
Hsinchu Production Group	2,173	2,230	2,250	2,218
Southern Taiwan Production Group	3,387	3,571	3,751	3,667
Shanghai	650	—	—	—
United States	4	4	4	4
Total	6,214	5,805	6,005	5,889

As of December 31, 2017 and 2018 and March 31, 2019, employees of Unimos Shanghai are excluded due to Unimos Shanghai is no longer a subsidiary of the Company following the equity interests transfer completed in March 2017.

Our employees are not covered by any collective bargaining agreements. We have not experienced any strikes or work stoppages by our employees and believe that our relationship with our employees is good.

Restricted Shares

On November 12, 2014, the board of directors of the Company approved 2014 Restricted Stock Award Agreement which has 17,300,000 restricted shares available for issuance. The par value and granting price of the restricted shares were NT\$10 and zero, respectively. The issuance of the restricted shares was approved by the Special General Meeting of the Shareholders' of the Company on December 30, 2014 and approved by the Financial Supervisory Commission of ROC on June 30, 2015. Under the Restricted Stock Award Agreement, the restricted shares will be issued to the employees determined by the board. The restricted shares received will be vested on the vesting ratio when the determined employees accomplish the required years of services and performance conditions. The restricted shares are not restricted for the dividend distribution. The employees are required to return the received restricted shares but not the dividends received if they resign during the vesting period. The returned restricted shares will be retired and cancelled. In 2016, 1,548,000 restricted shares were granted and 927,364 restricted shares were forfeited. In 2017, 695,200 restricted shares were forfeited. In 2018, 371,977 restricted shares were forfeited.

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Item 7. Major Shareholders and Related Party Transactions

Major Shareholders

The following table and information set out certain information known to us concerning the record ownership of our shares as of March 28, 2017, June 19, 2018 and April 12, 2019 (our most recent record date) (1) the largest ten shareholders of the Company as of such record date and (2) our directors and executive officers as a group.

Name of Beneficial Owners	March 28, 2017		June 19, 2017		April 12, 2019(1)	
	Numbers of Shares Owned	Percentage of Shares Owned	Numbers of Shares Owned	Percentage of Shares Owned	Numbers of Shares Owned	Percentage of Shares Owned
Siliconware Precision Industries Co., Ltd	132,775,000	14.97%	156,045,540	18.22%	148,910,390	20.12%
Depository(2)	380,941,160	42.95%	302,785,500	35.36%	99,507,534	13.45%
Citibank (Taiwan) in its capacity as Master Custodian for Investment Account of GIC Pte Ltd. (Singapore)	39,323,000	4.43%	39,371,000	4.43%	22,225,661	3.00%
Morgan Stanley & Co. International Plc	*	*	*	*	17,759,559	2.40%
Fubon Life Insurance Co., Ltd.	16,100,000	1.82%	16,100,000	1.82%	13,683,762	1.85%
Shih-Jye Cheng(3)	*	*	*	*	12,150,161	1.64%
Cathay Life Insurance Co., Ltd.	12,639,000	1.43%	12,639,000	1.43%	11,277,000	1.52%
JPMorgan Chase Bank N.A., Taipei Branch in custody for Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds	*	*	*	*	9,594,464	1.30%
Norges Bank	*	*	*	*	9,088,840	1.23%
New Labor Retirement Fund	*	*	*	*	8,518,809	1.15%
Directors and executive officers, as a group(4)	10,001,200(5)	1.13%(5)	9,691,200(6)	1.13%(6)	15,748,054(7)	2.13%(7)

Notes:

* Was not one of the largest ten shareholders of the Company as of the applicable record date.

(1) Our most recent record date.

(2) As record owner of our ADSs. With effect from October 31, 2016, Citibank, N.A. acts as the depository.

(3) Shih-Jye Cheng is a director and president of the Company, whose numbers of shares owned also included in directors and executive officers, as a group.

(4) Calculated as the sum of: (a) with respect to directors and executive officers who are serving in their personal capacity, the number of shares held by such directors and executive officers and (b) with respect to directors who are serving in the capacity as legal representatives, the number of shares owned by such institutional or corporate shareholder for which director is a legal representative.

(5) As of March 31, 2017.

(6) As of March 31, 2018.

(7) As of March 31, 2019.

Except for holders of our ADSs, none of our major shareholders have different voting rights from those of other shareholders.

As of March 31, 2019, a total of 727,264,797 common shares were outstanding. With certain limited exceptions, holders of common shares that are not ROC persons are required to hold their common shares through their custodians in the ROC. As of March 31, 2019, 99,907,520 common shares were registered in the name of a nominee of Citibank, N.A., the depository under our ADSs Deposit Agreement. Citibank, N.A., has advised us that, as of March 31, 2019, 4,995,376 ADSs, representing 99,907,520 common shares, were held of record by Cede & Co. and 328 other registered shareholders domiciled in and outside of the United States. We have no further information as to common shares held, or beneficially owned, by US persons.

Related Party Transactions*Unimos Microelectronics (Shanghai) Co., Ltd.*

We conducted our PRC operations through Unimos Shanghai, the 45.02%-owned affiliate of ChipMOS BVI, our controlled subsidiary. On November 30, 2016, the Company and Tsinghua Unigroup agreed to form a joint-venture. Under the joint-venture, the Equity Interest Transfer Agreements among ChipMOS BVI, a wholly-owned subsidiary of the Company, and some strategic investors which including Unigroup Guowei, a subsidiary of Tsinghua Unigroup, were executed. Pursuant to the agreement, ChipMOS BVI, would sell, for the aggregate purchase price of approximately RMB 484 million, 54.98% equity interests of its wholly-owned subsidiary, Unimos Shanghai, to the strategic investors, and Unigroup Guowei would hold 48% equity interests of Unimos Shanghai, and the other strategic investors, including a limited partnership owned by Unimos Shanghai's employees, would own approximately 6.98% equity interest of Unimos Shanghai. Unimos Shanghai is no longer the subsidiary of the Company following the sale of equity interests, which was completed in March 2017.

Under a technology transfer agreement dated October 3, 2011 which became effective on August 1, 2012, ChipMOS Bermuda licensed certain technologies and systems, and agreed to provide certain technical support and consulting services to Unimos Shanghai relating to those technologies and systems, and Unimos Shanghai will pay an aggregate of RMB 27 million to ChipMOS Bermuda by forty installments on the last day of each quarter during the term of this agreement. Following the merger of ChipMOS Bermuda and the Company which was effective on October 31, 2016, the Company is the surviving company to provide Unimos Shanghai with technical support and consulting services.

Pursuant to the Technology Transfer and License Agreement and Addendums dated May 27, 2016, August 5, 2016 and January 19, 2017 entered between the Company and Unimos Shanghai, the Company agreed to transferred certain technologies for LCD driver IC assembly and testing and wafer bumping and provide certain technical assistance and consulting services to Unimos Shanghai, and Unimos Shanghai agreed to pay the Company the license fee in the amount of US\$1 million and a running royalty for the foregoing license equivalent to 0.5% of the total earnings of the sales (excluding rebate, refund and rework) of the licensed technologies with a cap of US\$15 million. In April 2018, both parties agreed to terminate the agreement after an amicable negotiation.

Item 8. Financial Information**Consolidated Financial Statements and Other Financial Information**

Please see "Item 18. Financial Statements" and pages F-1 through F-84.

Legal Proceedings

We were not involved in any material litigation in 2018 and are not currently involved in any material litigation.

For certain information regarding legal proceedings relating to certain of our current and former directors, see "Item 6. Directors, Senior Management and Employees—Directors and Senior Management".

Dividends and Dividend Policy

The following table sets forth the distribution per share paid during each of the years indicated in respect of common shares outstanding on the record date eligible to the payment of those distributions. During 2016, 2017 and 2018, we paid cash distributions in the amounts of NT\$2.09, NT\$1.00 and NT\$0.30 (US\$0.01), respectively.

	<u>Cash Distributions per Share</u> (NT\$)	<u>Stock Dividends per Share</u> (NT\$)	<u>Total Shares Issued as Stock Dividends</u>	<u>Outstanding Common Shares at Year End</u>
2016	2.09	—	—	856,754,261
2017	1.00	—	—	856,059,061
2018	0.30	—	—	727,264,797

Under the Company's articles of incorporation, a proposal on the dividend distribution shall be submitted by the broad of directors annually to the shareholders' general meeting, and be determined based on factors including the past years' profit, current and future investment environment, capital needs, market competition, and budgets, with an aim to pursuing shareholders' interests and balancing the dividend distribution and the long-term financial plan. The distribution of profits can be made in the form of cash or stock dividends, provided that the cash dividend shall account for at least 10% of the total profit distributed as dividends in the given year.

Item 9. The Offer and Listing

Listing

The principal trading market for our common shares is the TWSE. Our common shares have been listed on the TWSE under the symbol “8150” since April 11, 2014, and the ADSs have been listed on the NASDAQ under the symbol “IMOS” since November 1, 2016. The outstanding ADSs are identified by the CUSIP number 16965P202.

Item 10. Additional Information

The following information relates to our shares, including summaries of certain provisions of the Company’s articles of incorporation, the ROC Company Act, and Securities and Exchange Act.

General

The authorized share capital of the Company will be as provided in its articles of incorporation, of which such number of shares as to be determined will be issued.

Dividends

Except under limited circumstances, the Company will not permitted to distribute dividends or make other distributions to shareholders in any given year in which it did not record net income or retained earnings (excluding reserves). The ROC Company Act also requires that 10% of annual net income (less prior years’ losses, if any, and applicable income taxes) be set aside as a legal reserve until the accumulated legal reserve equals the paid-in capital of the Company. In addition, the articles of incorporation of the Company provides that before a dividend is paid out of the Company’s annual net income:

- up to 0.5% of the Company’s annual profits (less prior years’ accumulated losses, if any) should be paid to the directors of the Company as compensation; and
- 10% of the annual profits (less prior years’ accumulated losses, if any) should be paid to the employees of the Company. The employee compensation may be paid in shares or in cash as determined by a majority of directors in attendance at a meeting attended by over two-thirds of the board of directors and such resolution shall be reported to the shareholders’ meeting. Such employees include those of the Company’s subsidiaries.

At the annual general meeting of shareholders, the board of the Company will submit to the shareholders for their approval any proposal for the distribution of dividends or the making of any other distribution to shareholders from the Company’s net income (less prior years’ losses and legal and special reserves plus the accumulated undistributed profit at the beginning of the preceding fiscal year and the adjusted undistributed profit of the given fiscal year) for the preceding fiscal year. All the outstanding and fully paid shares of the Company as of the relevant record date are entitled to share equally in any dividend or other distribution so approved. Dividends may be distributed in cash, in the form of common shares or a combination of the two, as determined by the shareholders at the meeting. The articles of incorporation of the Company provides that cash dividend distribution should not be lower than 10% of the total dividend amount.

The Company will also be permitted to make distributions to its shareholders in cash or in the form of common shares from reserves if it has no accumulated loss. However, the distribution payable out of the Company’s legal reserve can only come from the amount exceeding 25% of the total paid-in capital.

Changes in Share Capital

Under the ROC Company Act, any change in the authorized share capital of a company limited by shares requires an amendment to its articles of incorporation, which in turn requires approvals each at the meeting of the board of directors and shareholders’ meeting. In the case of a public company such as the Company, it must also make an effective registration with the FSC and an amendment to the corporate registration with the Hsinchu Science Park Bureau of the Ministry of Science and Technology. Authorized but unissued common shares may be issued, subject to the applicable ROC law, upon terms as the board of the Company may determine. See “Item 5. Operating and Financial Review and Prospects—Liquidity and Capital Resources” for additional information.

Preemptive Rights

Under the ROC Company Act, when an ROC company issues new shares for cash, existing shareholders who are listed on the shareholders' register as of the record date have preemptive rights to subscribe for the new issue in proportion to their existing shareholdings, while a company's employees, whether or not they are shareholders of the Company, have rights to subscribe for 10% to 15% of the new issue. Any new shares that remain unsubscribed at the expiration of the subscription period may be freely offered, subject to compliance with the applicable ROC law.

In addition, in accordance with the ROC Securities and Exchange Act, a public company that intends to offer new shares for cash must offer to the public at least 10% of the shares to be sold, except under certain circumstances or when exempted by the FSC. This percentage can be increased by a resolution passed at a shareholders' meeting, which would diminish the number of new shares subject to the preemptive rights of existing shareholders.

These preemptive rights provisions do not apply to offerings of new shares through a private placement approved at a shareholders' meeting.

Meeting of Shareholders

The Company will be required to hold an annual general meeting of shareholders within six months following the end of each fiscal year. These meetings are generally held in Hsinchu, Taiwan. Any shareholder who holds 1% or more of the Company's issued and outstanding shares may submit one proposal, in writing or by electronic means designated by the Company, for discussion at the annual general meeting. Extraordinary shareholders' meetings may be convened by resolution of the board of directors or by the board of directors upon the written request of any shareholder or shareholders who have held 3% or more of the issued and outstanding shares for a period of one year or longer. Any one or more shareholders who have held in aggregate more than half of the issued and outstanding shares for at least three consecutive months may convene an extraordinary shareholders' meeting. Shareholders' meetings may also be convened by the audit committee. Notice in writing of shareholders' meetings, stating the place, time and purpose, must be dispatched to each shareholder at least 30 days, in the case of annual general meetings, and 15 days, in the case of extraordinary meetings, before the date set for each meeting. A majority of the holders of all issued and outstanding common shares present at a shareholders' meeting constitutes a quorum for meetings of shareholders. If a company adopts a nomination procedure for election of directors in its articles of incorporation, shareholders representing 1% or more of the total issued shares of such company may submit a candidate list in writing to the Company along with relevant information and supporting documents in accordance with the requirements under the ROC Company Act. Under the Company's articles of incorporation, the Company presently adopts such nomination procedure for the election of independent directors and, if so resolved by the shareholders at the annual general meeting of shareholders in June of 2019, will adopt such nomination procedures for election of all directors.

Voting Rights

Under the ROC Company Act, except under limited circumstances, shareholders have one vote for each common share held. Under the ROC Company Act, the directors are elected at a shareholders' meeting through cumulative voting.

In general, a resolution can be approved by the holders of at least a majority of our shares represented at a shareholders' meeting at which the holders of a majority of all issued and outstanding common shares are present. Under the ROC Company Act, the approval by at least a majority of our shares represented at a shareholders' meeting in which a quorum of at least two-thirds of all issued and outstanding common shares are represented is required for major corporate actions, including:

- amendment to the Articles of Incorporation, including increase of authorized share capital and any changes of the rights of different classes of shares;
- execution, amendment or termination of any contract through which the Company leases its entire business to others, or the Company appoints others to operate its business or the Company operates its business with others on a continuous basis;
- transfer of entire business or assets or a substantial part of its business or assets;
- acquisition of the entire business or assets of any other company, which would have a significant impact on the Company's operations;
- distribution of any stock dividend;
- dissolution, merger or spin-off of the Company;
- issuance of restricted shares to employees; and
- removal of the directors.

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However, in the case of a public company such as the Company, there is one exception if the total number of shares represented by the shareholders present at a shareholders' meeting is not sufficient to meet the above criteria (referred to the holders of at least two-thirds of all issued and outstanding common shares presented at the meeting), the resolution may be adopted by the holders of at least two-thirds of the shares represented at a shareholders' meeting at which the holders of at least a majority of all issued and outstanding common shares are present.

A shareholder may be represented at an annual general or extraordinary meeting by proxy if a valid proxy form is delivered to the Company five days before the commencement of the annual general or extraordinary shareholders' meeting. Shareholders may exercise their voting rights by way of a written ballot or by way of electronic transmission if the voting decision is delivered to us two days before the commencement of the annual general or extraordinary shareholders' meeting.

Any shareholder who has a personal interest in a matter to be discussed at shareholders' meeting of the Company, the outcome of which may impair interests of the Company, shall not vote or exercise voting rights on behalf of another shareholder on such matter.

Holders of the Company's ADSs do not have the right to exercise voting rights with respect to the underlying shares of the Company, except as described in the Deposit Agreement.

Other Rights of Shareholders

Under the ROC Company Act, dissenting shareholders are entitled to appraisal rights in certain major corporate actions such as a proposed amalgamation by the company. If agreement with the company cannot be reached, dissenting shareholders may seek a court order for the company to redeem all of their shares. Shareholders may exercise their appraisal rights by serving written notice on the company prior to or at the related shareholders' meeting and/or by raising and registering an objection at the shareholders' meeting. In addition to appraisal rights, shareholders have the right to sue for the annulment of any resolution approved at a shareholders' meeting where the procedures were legally defective within 30 days after the date of the shareholders' meeting. One or more shareholders who have held 1% or more of the issued and outstanding shares of a company for a period of six months or longer may require an independent director to bring a derivative action on behalf of the company against a director as a result of the director's unlawful actions or failure to act.

One or more shareholders who have held 3% or more of the issued and outstanding shares may institute an action with a court to remove a director who has materially violated the applicable laws or the articles of incorporation of the Company or has materially damaged the interests of the Company if a resolution for removal on such grounds has first been voted on and rejected by the shareholders and such suit is filed within thirty days of such shareholders' vote.

One or more shareholders who have held 1% or more of the issued and outstanding shares for six months or longer may request a court to appoint an inspector to examine the books, accounts and financial conditions of the Company. The court may, if it deems necessary based on the inspector's report, order the independent director to convene the shareholders' meeting.

Rights of Holders of Deposited Securities

The voting rights of a holder of the Company ADSs as to the Company shares represented by those the Company ADSs are governed by the Deposit Agreement. Holders of ADSs will be able to exercise voting rights on an individual basis as follows: if a holder of the Company ADSs outstanding at the relevant record date instructs the depositary to vote in a particular manner for or against a resolution, including the election of directors, the depositary will cause all the Company shares represented by such holder's ADSs to be voted in that manner. If the depositary does not receive timely instructions from a holder of the Company ADSs outstanding at the relevant record date to vote in a particular manner for or against any resolution, including the election of directors, such holders of the Company ADSs will be deemed to have instructed the depositary or its nominee to give a discretionary proxy to a person designated by the Company to vote all the Company shares represented by such holder's ADSs at the discretion of such person, which may not be in the interest of holders of the Company ADSs.

Register of Shareholders and Record Dates

The Company's share registrar, KGI Securities Co., Ltd., maintains the Company's register of shareholders. Under the ROC Company Act and the articles of incorporation of the Company, the Company may, by giving advance public notice, set a record date and close the register of shareholders for a specified period in order for it to determine the shareholders or pledgees that are entitled to rights pertaining to the Company shares. The specified period required is as follows:

- annual general meeting—60 days;
- extraordinary shareholders' meeting—30 days; and
- relevant record date for distribution of dividends, bonuses or other interests —5 days.

Annual Financial Statements

At least ten days before the annual general meeting, the Company's annual financial statements, which are prepared in conformity with Taiwan IFRS, must be available at the Company's principal executive office in Hsinchu, Taiwan for inspection by the shareholders.

Transfer of the Shares

The transfer of the shares in registered form is effected by endorsement and delivery of the related share certificates but, in order to assert shareholders' rights against the Company, the transferee must have his name and address registered on its register of shareholders. Shareholders are required to file their respective specimen seals, also known as chops, with the Company. Chops are official stamps widely used in Taiwan by individuals and other entities to authenticate the execution of official and commercial documents. The settlement of trading in the shares is normally carried out on the book-entry system maintained by the Taiwan Depository & Clearing Corporation.

Acquisition of the Shares by us

Under the ROC Securities and Exchange Act, the Company may purchase the shares as treasury stock under limited circumstances, including:

- to transfer shares to the Company's employees;
- to deliver shares upon the conversion or exercise of bonds with warrants, preferred shares with warrants, convertible bonds, convertible preferred shares or warrants issued by the Company; or
- to maintain the Company's credit and its shareholders' equity, provided that the shares so purchased shall be cancelled.

The Company may purchase the shares on the TWSE or by means of a public tender offer. These transactions require the approval of a majority of the board of the Company at a meeting in which at least two-thirds of the directors are in attendance. The total amount of the Company shares purchased for treasury stock may not exceed 10% of the total issued shares. In addition, the total cost of the purchased shares shall not exceed the aggregate amount of the retained earnings, any premium from share issuances and the realized portion of the Company's capital reserve. The shares purchased by the Company pursuant to the first two items above will be transferred to the intended transferees within five years of the purchase; otherwise the shares will be cancelled. For the shares to be cancelled under the third item above, the Company is required to complete an amendment registration for the cancellation within six months of the purchase.

The Company may not pledge or hypothecate any of its shares purchased by it. In addition, it may not exercise any shareholders' right attaching to such shares. In the event that the Company purchases its shares on the TWSE, its affiliates, directors, managers, shareholders holding more than 10% of the total issued shares and their respective spouses and minor children and/or nominees are prohibited from selling any shares of the Company during the period in which the Company is purchasing its shares.

Pursuant to the ROC Company Act, an entity in which the Company directly or indirectly owns more than 50% of the voting shares or paid-in capital, which is referred to as a controlled entity, may not purchase the shares of the Company. Also, if the Company and a controlled entity jointly own, directly or indirectly, more than 50% of the voting shares or paid-in capital of another entity, which is referred to as a third entity, the third entity may not purchase shares in either the Company or a controlled entity.

Liquidation Rights

In the event of the liquidation of the Company, the assets remaining after payment of all debts, liquidation expenses and taxes will be distributed pro rata to the shareholders in accordance with the relevant provisions of the ROC Company Act.

Transfer Restriction

Substantial Shareholders

The ROC Securities and Exchange Act currently requires:

- each director, manager, or substantial shareholder (that is, a shareholder who holds more than 10% shares of a company), and their respective spouses, minor children or nominees, to report any change in that person's shareholding to the issuer of the shares and the FSC; and

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- each director, manager, or substantial shareholder, and their respective spouses, minor children or nominees, after acquiring the status of director, manager, or substantial shareholder for a period of six months, to report his or her intent to transfer any shares on the TWSE to the FSC at least three days before the intended transfer, unless the number of shares to be transferred does not exceed 10,000 shares.

In addition, the number of shares that can be sold or transferred on the TWSE by any person subject to the restrictions described above on any given day may not exceed the greater of:

- 0.2% of the outstanding shares of the company in the case of a company with no more than 30 million outstanding shares; or 0.2% of 30 million shares plus 0.1% of the outstanding shares exceeding 30 million shares in the case of a company with more than 30 million outstanding shares; and
- 5% of the average trading volume (number of shares) on the TWSE for the ten consecutive trading days preceding the reporting day on which the director, manager or substantial shareholder reports the intended share transfer to the FSC.

These restrictions do not apply to sales or transfers of the Company's ADSs.

Material Contracts

We have entered into the following contracts that are effective or within the two years preceding the date of this Annual Report on Form 20-F that are or may be material:

- On May 16 2016, the Company obtained a syndicated loan facility from banks in Taiwan in the amount of NT\$13.2 billion separated into two parts with term of five years. This loan facility was used to refinance the existing bank debts and for general corporate purposes.
- On November 30, 2016, ChipMOS BVI, Unigroup Guowei and the Company entered into the Equity Interest Transfer Agreement, pursuant to which Unigroup Guowei will purchase 48% equity interests of Unimos Shanghai.
- On November 30, 2016, ChipMOS BVI and Gongqingcheng Changhou Investment Management Ltd. ("Gongqingcheng Changhou") entered into the Equity Interest Transfer Agreement, pursuant to which Gongqingcheng Changhou will purchase 2% equity interests of Unimos Shanghai.
- On November 30, 2016, ChipMOS BVI and Accretech (China) Co., Ltd. ("Accretech (China)") entered into the Equity Interest Transfer Agreement, pursuant to which Accretech (China) will purchase 1.4162% equity interests of Unimos Shanghai.
- On November 30, 2016, ChipMOS BVI and Chao-Jung Tsai entered into the Equity Interest Transfer Agreement, pursuant to which Chao-Jung Tsai will purchase 1.3443% equity interests of Unimos Shanghai.
- On November 30, 2016, ChipMOS BVI and Shanghai Zuzhu Business Consulting Partnership (Limited Partnership) ("Shanghai Zuzhu") entered into the Equity Interest Transfer Agreement, pursuant to which Shanghai Zuzhu will purchase 0.9401% equity interests of Unimos Shanghai.
- On November 30, 2016, ChipMOS BVI and Shih-Jye Cheng entered into the Equity Interest Transfer Agreement, pursuant to which Shih-Jye Cheng will purchase 1.1202% equity interests of Unimos Shanghai.
- On November 30, 2016, ChipMOS BVI and Shou-Kang Chen entered into the Equity Interest Transfer Agreement, pursuant to which Shou-Kang Chen will purchase 0.1240% equity interests of Unimos Shanghai.
- On November 30, 2016, ChipMOS BVI and David W. Wang entered into the Equity Interest Transfer Agreement, pursuant to which David W. Wang will purchase 0.0310% equity interests of Unimos Shanghai.
- On November 30, 2016, ChipMOS BVI, Unigroup Guowei, Gongqingcheng Changhou, Accretech (China), Chao-Jung Tsai, Shanghai Zuzhu, Shih-Jye Cheng, Shou-Kang Chen, David W. Wang and the Company entered into the Agreement for Sino-Foreign Equity Joint Venture, pursuant to which the parties agreed to operate Unimos Shanghai's business together.
- On April 10, 2017, ChipMOS BVI, Unigroup Guowei, Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership) ("Gongqingcheng Changhou Hongxin"), Accretech (China), Chao-Jung Tsai, Shanghai Zuzhu, Shih-Jye Cheng, Shou-Kang Chen, David W. Wang and the Company entered into the Amendment of Agreement for Sino-Foreign Equity Joint Venture, pursuant to which the Gongqingcheng Changhou transfer the interest to Gongqingcheng Changhou Hong Xin.
- On November 28, 2017, ChipMOS BVI, Unigroup Guowei, Gongqingcheng Changhou Hong Xin, Accretech (China), Chao-Jung Tsai, Shanghai Zuzhu, Shih-Jye Cheng, Shou-Kang Chen, David W. Wang and the Company entered into the Amendment of Agreement for Sino-Foreign Equity Joint Venture, pursuant to which the extension of the paid in capital.

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- On August 1, 2018, ChipMOS BVI, Unigroup Guowei, Gongqingcheng Changhou Hong Xin, Accretech (China), Chao-Jung Tsai, Shanghai Zuzhu, Shih-Jye Cheng, Shou-Kang Chen, David W. Wang and the Company entered into the Amendment of Agreement for Sino-Foreign Equity Joint Venture, pursuant to which ChipMOS TECHNOLOGIES (Shanghai) LTD., was renamed to Unimos Shanghai.
- On December 29, 2018, ChipMOS BVI, Beijing Unis Memory Technology Co., Ltd. (“Beijing Ziguang Storage”) Gongqingcheng Changhou Hong Xin, Accretech (China), Chao-Jung Tsai, Shanghai Zuzhu, Shih-Jye Cheng, Shou-Kang Chen, David W. Wang and the Company entered into the Amendment of Agreement for Sino-Foreign Equity Joint Venture, pursuant to which the Unigroup Guowei will transfer the 48.0% equity interests of Unimos Shanghai to Beijing Ziguang Storage.
- On February 1, 2019, ChipMOS BVI, Beijing Ziguang Storage, Gongqingcheng Changhou Hong Xin, Accretech (China), Chao-Jung Tsai, Shanghai Zuzhu, Shih-Jye Cheng, Shou-Kang Chen, David W. Wang and the Company entered into the Amendment of Agreement for Sino-Foreign Equity Joint Venture, pursuant to which the Gongqingcheng Changhou Hong Xin will transfer the 2% equity interests of Unimos Shanghai to Beijing Ziguang Storage.
- On May 15 2018, the Company obtained a syndicated loan facility from banks in Taiwan in the amount of NT\$12.0 billion separated into two parts with term of five years. This loan facility was used to refinance the existing bank debts and for general corporate purposes.

For additional information regarding the Merger see “Item 4. Information on the Company—Our Structure and History”.

Please see also “Item 7. Major Shareholders and Related Party Transactions” for further summary information regarding the contracts listed under “—Material Contracts” that are with certain of our related parties.

Foreign Investment in the ROC

Since 1983, the ROC government has periodically enacted legislation and adopted regulations to permit foreign investment in the ROC securities market.

On September 30, 2003, the ROC Executive Yuan approved an amendment to Regulations Governing Investment in Securities by Overseas Chinese and Foreign National, or the Regulations, which took effect on October 2, 2003. According to the Regulations, the ROC Financial Supervisory Commission (the “ROC FSC”) abolished the mechanism of the so-called “qualified foreign institutional investors” and “general foreign investors” as stipulated in the Regulations before the amendment.

Under the Regulations, foreign investors are classified as either “onshore foreign investors” or “offshore foreign investors” according to their respective geographical location. Both onshore and offshore foreign investors are allowed to invest in ROC securities after they register with the TWSE. The Regulations further classify foreign investors into foreign institutional investors and foreign individual investors. “Foreign institutional investors” refer to those investors incorporated and registered in accordance with foreign laws outside of the ROC (i.e., offshore foreign institutional investors) or their branches set up and recognized within the ROC (i.e., onshore foreign institutional investors). Offshore overseas Chinese and foreign individual investors may be subject to a maximum investment ceiling that will be separately determined by the ROC FSC after consultation with the Central Bank of the Republic of China (Taiwan). Currently, there is no maximum investment ceiling for offshore overseas investment in the ROC securities market.

Except for certain specified industries, such as telecommunications, investments in ROC-listed companies by foreign investors are not subject to individual or aggregate foreign ownership limits. Custodians for foreign investors are required to submit to the Central Bank of the Republic of China (Taiwan) and the TWSE a monthly report of trading activities and status of assets under custody and other matters. Capital remitted to the ROC under these guidelines may be remitted out of the ROC at any time after the date the capital is remitted to the ROC. Capital gains and income on investments may be remitted out of the ROC at any time.

Foreign investors (other than foreign investors who have registered with the TWSE for making investments in the ROC securities market) who wish to make direct investments in the shares of ROC companies are required to submit a foreign investment approval application to the MOEAIC or other applicable government authority. The MOEAIC or such other government authority reviews each foreign investment approval application and approves or disapproves each application after consultation with other governmental agencies (such as the Central Banks of the Republic of China (Taiwan)) and the ROC FSC.

Under the current ROC law, any non-ROC person possessing a foreign investment approval may repatriate annual net profits, interest and cash dividends attributable to the approved investment. Stock dividend attributable to this investment, investment capital and capital gains attributable to this investment may be repatriated by the non-ROC person possessing a foreign investment approval after approvals of the MOEAIC or other government authorities have been obtained.

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In addition to the general restriction against direct investment by non-ROC persons in securities of ROC companies, non-ROC persons (except in certain limited cases) are currently prohibited from investing in certain industries in the ROC pursuant to a “negative list”, as amended by the ROC Executive Yuan. The prohibition on foreign investment in the prohibited industries specified in the negative list is absolute in the absence of a specific exemption from the application of the negative list. Pursuant to the negative list, certain other industries are restricted so that non-ROC person (except in limited cases) may invest in these industries only up to a specified level and with the specific approval of the relevant competent authority that is responsible for enhancing the relevant legislation that the negative list is intended to implement.

The ROC FSC announced on April 30, 2009 the Regulations Governing Mainland Chinese Investors’ Securities Investments (“PRC Regulations”) and amended the same on October 6, 2010. According to the PRC Regulations, a PRC QDII is allowed to invest in ROC securities (including less than 10% shareholding of a ROC company listed in TWSE or Taipei Exchange). Nevertheless, the total investment amount of QDIIs cannot exceed US\$500 million. For each QDII, the custodians of such QDII must apply with the TWSE for the remittance amount for each QDII, which cannot exceed US\$100 million, and QDII can only invest in the ROC securities market with the amount approved by the TWSE. In addition, QDIIs are currently prohibited from investing in certain industries, and their investment of certain other industries in a given company is restricted to certain percentage pursuant to a list promulgated by the FSC and amended from time to time. PRC investors other than QDII, however, are prohibited from making investments in a ROC company listed on the TWSE or the Taipei Exchange, unless with approval from the MOEAIC for its investment of 10% or more (or other percentage applicable to certain restricted industries) of the equity interest of such ROC company.

In addition to investments permitted under the PRC Regulations, PRC investors who wish to make (i) direct investment in the shares of ROC private companies or (ii) investments, individually or aggregately, in 10% or more (or other percentage applicable to certain restricted industries) of the equity interest of a ROC company listed on the TWSE or Taipei Exchange are required to submit an investment approval application to the MOEAIC or other government authority. The MOEAIC or such other government authority reviews investment approval application and approved or disapproves each application after consultation with other governmental agencies. Furthermore, PRC investor who wishes to be elected as a ROC company’s director or supervisor shall also submit an investment approval application to the MOEAIC or other government authority for approval.

Depository Receipts

In April 1992, the ROC FSC began allowing ROC companies listed on the TWSE, with the prior approval of the FSC, to sponsor the issuance and sale of depository receipts. The depository receipts represent depository shares. In December 1994, the ROC Ministry of Finance began allowing companies whose shares are listed on the Taipei Exchange also to sponsor the issuance and sale of depository receipts.

After the issuance of a depository share, a holder of depository receipts (other than citizens of the PRC and entities organized under the laws of the PRC save for QDII or those which otherwise obtain the approval of MOEAIC) may request the depository to either cause the underlying shares to be sold in the ROC and to distribute the sale proceeds to the holder or to withdraw from the depository receipt facility the shares represented by the depository receipts to the extent permitted under the deposit agreement and transfer the shares to the holder.

Under the current ROC law, if you are a non-ROC holder of our ADSs, you must register with the TWSE as a foreign investor before you will be permitted to withdraw and hold the shares represented by the depository receipts. In addition to obtaining registration with the TWSE, you must also (i) appoint a qualified local agent to, among other things, open a securities trading account with a local securities brokerage firm and a bank account to remit funds, exercise shareholder’s rights and perform other functions as holders of ADSs may designate, (ii) appoint a custodian to hold the securities and cash proceeds, confirm transactions, settle trades and report and declare other relevant information and; (iii) appoint a tax guarantor as guarantor for the full compliance of the withdrawing depository receipt holders’ tax filing and payment obligations in the ROC. A depository receipt holder not registered as a foreign investor with the TWSE, or not has made the necessary appointments as outlined above, will be unable to hold or subsequently transfer the shares withdrawn from the depository receipt facility.

No deposits of shares may be made in a depository receipt facility and no depository shares may be issued against deposits without specific FSC approval, unless they are:

- (i) stock dividends;
- (ii) free distributions of shares;
- (iii) due to the exercise by the depository receipt holder preemptive rights in the event of capital increases for cash; or

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- (iv) if permitted under the deposit agreement and custody agreement and within the amount of depositary receipts which have been withdrawn, due to the direct purchase by investors or purchase through the depositary on the TWSE or Taipei Exchange or delivery by investors of the shares for deposit in the depositary receipt facility. In this event, the total number of depositary receipts outstanding after an issuance cannot exceed the number of issued depositary receipts previously approved by the FSC in connection with the offering plus and ADSs issued pursuant to the events described in (i), (ii) and (iii) above.

The depositary, without obtaining further approvals from the Central Bank of the Republic of China (Taiwan) or any other governmental authority or agency of the ROC, may convert NT dollars into other currencies, including US dollars, in respect of:

- the proceeds of the sale of common shares represented by ADSs or received as share dividends with respect to the common shares and deposited into the depositary receipt facility; and
- any cash dividend or cash distributions received.

In addition, the depositary may also convert into NT dollars incoming payments for purchase of common shares for deposit in the depositary receipts facility against the creation of additional ADSs. If you withdraw the common shares underlying your ADSs and become a holder of the Company's common shares, you may convert into NT dollars subscription payment for rights offerings. The depositary may be required to obtain foreign exchange payment approval from the Central Bank of the Republic of China (Taiwan) on a payment-by-payment basis for conversion from NT dollars into foreign currencies of the proceeds from the sale of subscription rights of new common shares. Although it is expected that the Central Bank of the Republic of China (Taiwan) will grant approval as routine matter, required approvals may not be obtained in a timely manner, or at all.

Exchange Controls

The ROC Foreign Exchange Control Law and regulations provide that all foreign exchange transactions must be executed by banks designated by the FSC and by the Central Bank of the Republic of China (Taiwan) to engage in such transactions. Current regulations favor trade-related or service-related foreign exchange transactions. Consequently, foreign currency earned from exports of merchandise and services may now be retained and used freely by exporters, and all foreign currency needed for the importation of merchandise and services may be purchased freely from the designated foreign exchange banks.

Apart from trade-related or service-related foreign exchange transactions, ROC companies and individual residents of the ROC reaching the age of 20 years old may, without foreign exchange approval, remit foreign currency of up to US\$50 million (or its equivalent) and US\$5 million (or its equivalent) to and from the ROC, respectively, in each calendar year. The above limits apply to remittances involving either a conversion of NT dollars into a foreign currency or a conversion of foreign currency into NT dollars. In addition, a requirement is also imposed on all enterprises to register medium- and long-term foreign debt with the Central Bank of the Republic of China (Taiwan).

In addition, foreign persons may, subject to specified requirements but without foreign exchange approval of the Central Bank of the Republic of China (Taiwan), remit to and from the ROC foreign currencies of up to US\$100,000 (or its equivalent) per remittance if the required documentation is provided to the ROC authorities. The above limit applies to remittances involving either a conversion of NT dollars into a foreign currency or a conversion of foreign currency into NT dollars. The above limit does not, however, apply to the conversion of NT dollars into other currencies, including U.S. dollars, from the proceeds of a sale of any underlying shares withdrawn from a depositary receipt facility.

ROC Taxation

The following summary constitutes the material ROC tax consequences of the ownership and disposition of our shares or ADSs by and to a non-resident individual or non-resident entity (referred to here as a "non-ROC holder"). As used in the preceding sentence, a "non-resident individual" is a non-ROC national who owns our shares or ADSs and is not physically present in the ROC for 183 days or more during any calendar year, and a "non-resident entity" is a corporation or a non-corporate body that owns our shares or ADSs, is organized under the laws of a jurisdiction other than the ROC and has no fixed place of business or business agent in the ROC. Holders of our ADSs and shares should consult their own tax advisers concerning the tax consequences of owning our ADSs or shares and any other relevant taxing jurisdiction to which they are subject.

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Dividends

Dividends (whether in the form of cash or common shares) declared by the Company out of retained earnings and distributed to a non-ROC holder are subject to ROC withholding tax, currently at the rate of 21% (unless a preferable tax rate is provided under a tax treaty between the ROC and the jurisdiction where the non-ROC holder is a resident) on the amount of the distribution (in the case of cash dividends) or on the par value of the distributed our shares (in the case of stock dividends). The United States does not have an income tax treaty with the ROC. A 10% undistributed earnings tax was imposed on an ROC company for its after-tax earnings generated after January 1, 1998 which were not distributed in the following year. The undistributed earnings tax was reduced to 5% on January 1, 2018. The undistributed earnings tax so paid will further reduce the retained earnings available for future distribution. Furthermore, if and when the Company distributes any dividends in year 2018, for the portion of dividends out of those retained earnings on which the Company had paid the 10% ROC undistributed earnings tax, a credit of up to 5% of such portion of dividends may be offset against the 21% withholding tax imposed on the non-ROC holders. Starting from year 2019, no undistributed earnings tax paid can be offset as a credit against the 21% withholding tax.

Distributions of our shares or cash out of capital reserves are not subject to ROC withholding tax, except under limited circumstances.

Capital Gains

Starting from January 1, 2016, capital gains realized from the sale or disposal of our shares are exempt from ROC income tax under Article 4-1 of the ROC Income Tax Act.

Sales of our ADSs are not regarded as sales of ROC securities and thus any gains derived from transfers of our ADSs are not regarded as ROC-sourced income. Accordingly, any gains derived from transfers of our ADSs by non- ROC holders are not currently subject to ROC income tax.

Securities Transaction Tax

Securities transaction tax will be imposed on the seller at the rate of 0.3% of the transaction price upon a sale of our shares. Transfers of our ADSs are not subject to ROC securities transaction tax.

Subscription Rights

Distributions of statutory subscription rights for our shares in compliance with the ROC Company Act are currently not subject to ROC tax. Proceeds derived from sales of statutory subscription rights evidenced by securities are subject to securities transaction tax, currently at the rate of 0.3% of the gross amount received. Non-ROC holders are exempt from income tax on capital gains from the sale of statutory subscription rights evidenced by securities. Proceeds derived from sales of statutory subscription rights which are not evidenced by securities are not subject to securities transaction tax but are subject to income tax at a fixed rate of 20% of the income if the seller is a non-ROC holder. Subject to compliance with the ROC law, the Company, in its sole discretion, may determine whether statutory subscription rights are evidenced by securities.

Estate and Gift Tax

ROC estate tax is payable on any property within the ROC left by a deceased, and ROC gift tax is payable on any property within the ROC donated by an individual. Estate tax and gift tax are currently payable at the progressive rates of 10%, 15% and 20%. Under the ROC Estate and Gift Tax Act, common shares issued by ROC companies are deemed located in the ROC without regard to the location of the owner. It is unclear whether a holder of ADSs will be considered to own common shares for this purpose.

Tax Treaty

At present, the ROC has income tax treaties with Indonesia, Singapore, New Zealand, Australia, the United Kingdom, South Africa, Gambia, Eswatini, Malaysia, Macedonia, the Netherlands, Senegal, Sweden, Belgium, Denmark, Israel, Vietnam, Paraguay, Hungary, France, India, Slovakia, Switzerland, Germany, Thailand, Kiribati, Luxembourg, Austria, Italy, Japan, Canada and Poland. These tax treaties may limit the rate of ROC withholding tax on dividends paid with respect to common shares issued by ROC companies. A non-ROC holder of our ADSs may or may not be considered as the beneficial owner of our shares for the purposes of such treaties. Accordingly, holders of our ADSs who wish to apply a reduced withholding tax rate that is provided under a tax treaty should consult their own tax advisers concerning such application. The United States does not have an income tax treaty with the ROC.

Material U.S. Federal Income Tax Consequences

The discussion below is for general information only and is not, and should not be interpreted to be, tax advice to any holder of our ADSs. Each holder or prospective holder of our ADSs is urged to consult his, her or its own tax advisor.

General

This discussion is a general summary of the material U.S. federal income tax consequences to U.S. and Non-U.S. Holders, as defined below, of the ownership and disposition of our ADSs as of the date of this report. This summary is based on the provisions of the Internal Revenue Code of 1986, as amended, or the “Code,” the applicable Treasury regulations promulgated and proposed thereunder, judicial decisions and current administrative rulings and guidance, all of which are subject to change, possibly on a retroactive basis. This summary applies to you only if you hold our ADSs as a capital asset within the meaning of Section 1221 of the Code (generally, held for investment). The U.S. Internal Revenue Service, or the “IRS,” may challenge the tax consequences described below, and we have not requested, nor will we request, a ruling from the IRS or an opinion of counsel with respect to the U.S. federal income tax consequences of acquiring, holding or disposing of our ADSs. This summary does not purport to deal with all aspects of U.S. federal income taxation that may be relevant to the ownership of our ADSs. In particular, the discussion below does not address tax consequences that depend upon your particular tax circumstances nor does it cover any state, local or foreign law, or the possible application of the U.S. federal estate or gift tax laws. You are urged to consult your own tax advisor regarding the application of the U.S. federal income tax laws to your particular situation as well as any state, local, foreign and U.S. federal estate and gift tax consequences resulting from the ownership and disposition of our ADSs. In addition, this summary does not take into account special U.S. federal income tax rules that apply to particular categories of U.S. or Non-U.S. Holders of our ADSs, including, without limitation, the following:

- dealers, brokers or traders in securities electing to use a mark-to-market method of accounting;
- banks, thrifts or other financial institutions;
- individual retirement or tax-deferred accounts;
- insurance companies;
- tax-exempt organizations;
- regulated investment companies or real estate investment trusts;
- persons holding our ADSs as part of a hedging, straddle or conversion transaction for U.S. federal income tax purposes;
- persons required for U.S. federal income tax purposes to conform the timing of income accruals to their financial statements under Section 451 of the Code;
- persons whose functional currency for U. S. federal income tax purposes is not the U.S. dollar;
- persons subject to the alternative minimum tax;
- persons that own, or are treated as owning, 10% or more, by voting power or value, of our outstanding common stock (including common stock represented by ADSs);
- certain former U.S. citizens and residents who have expatriated; or
- persons receiving our ADSs pursuant to the exercise of employee stock options or otherwise as compensation.

U.S. Holders

For purposes of the discussion below, you are a “U.S. Holder” if you are a beneficial owner of our ADSs that is:

- an individual U.S. citizen or resident alien of the United States (as specifically defined for U.S. federal income tax purposes);

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- a corporation, or other entity treated as a corporation for U.S. federal income tax purposes, created or organized in or under the laws of the United States, any State or the District of Columbia;
- an estate whose income is subject to U.S. federal income tax regardless of its source; or
- a trust (x) if a U.S. court can exercise primary supervision over the trust's administration and one or more U.S. persons are authorized to control all substantial decisions of the trust or (y) that, if it was in existence on August 20, 1996, was treated as a U.S. person prior to that date and has a valid election in effect under applicable Treasury regulations to be treated as a U.S. person.

If a partnership holds our ADSs, the tax treatment of a partner in such partnership will generally depend upon the status of the partner and upon the activities of the partnership. If you are a partnership holding our ADSs or a partner in such partnership, you should consult your tax advisor with respect to the U.S. federal income tax consequences of the ownership and disposition of our ADSs by the partnership.

General

In general, a U.S. Holder who owns ADSs will be treated as the owner of the underlying shares represented by those ADSs for U.S. federal income tax purposes. Accordingly, no gain or loss will be recognized if a U.S. Holder exchanges ADSs for the underlying shares represented by those ADSs. The U.S. Department of the Treasury has expressed concern that parties to whom American depositary shares are released before shares are delivered to the depository ("pre-release"), or intermediaries in the chain of ownership between holders and the issuer of the security underlying the American depositary shares, may be taking actions that are inconsistent with the claiming of foreign tax credits by holders of American depositary shares. These actions would also be inconsistent with the claiming of the preferential rate of tax, described below, applicable to dividends received by certain non-corporate holders. Accordingly, the creditability of ROC taxes, and the availability of the preferential tax rate for dividends received by certain non-corporate U.S. Holders, each as described below, could be affected by actions taken by such parties or intermediaries.

Distributions

Subject to the "passive foreign investment company" ("PFIC") rules discussed below, the amount of any cash distribution (other than in liquidation) that you receive with respect to our ADSs plus the amount of any ROC taxes actually withheld therefrom (described above in "—ROC Taxation") generally will be taxed to a U.S. Holder as dividend income to the extent such distribution does not exceed ChipMOS Taiwan's current or accumulated earnings and profits ("E&P"), as calculated for U.S. federal income tax purposes. Such income will be includable in your gross income as ordinary income on the date of receipt by the Depository. Dividends received by individuals and certain other non-corporate U.S. Holders from "qualified foreign corporations" are taxed at the rate of either 0 percent, 15 percent or 20 percent, depending upon the particular taxpayer's U.S. federal income tax bracket; provided that the recipient-shareholder has held his or her shares as a beneficial owner for more than 60 days during the 121-day period beginning on the date which is 60 days before the shares' ex-dividend date. A foreign corporation is a "qualified foreign corporation" if the stock with respect to which it pays dividends is traded on an established securities market in the United States, provided that the foreign corporation is not a PFIC. ChipMOS Taiwan ADSs are traded on an established securities market in the United States, although ChipMOS Taiwan cannot guarantee that its ADSs will be so traded in the future. ChipMOS Taiwan does not expect to be treated as a PFIC for U.S. federal income tax purposes for the current taxable year or the foreseeable future. No assurance can be given, however, that the IRS will not disagree and seek to treat ChipMOS Taiwan as a PFIC. If ChipMOS Taiwan were a PFIC with respect to a particular U.S. Holder, dividends received from ChipMOS Taiwan would be taxed at regular ordinary income tax rates and certain other rules will apply. See "Passive Foreign Investment Company (PFIC)," below. Holders of ChipMOS Taiwan ADSs should consult their own tax advisors regarding the availability of a reduced dividend tax rate in light of their own particular circumstances. To the extent any distribution exceeds ChipMOS Taiwan's E&P, the distribution will first be treated as a tax-free return of capital to the extent of your adjusted tax basis in ChipMOS Taiwan ADSs and will be applied against and reduce such basis on a dollar-for-dollar basis (thereby increasing the amount of gain and decreasing the amount of loss recognized on a subsequent disposition of such ChipMOS Taiwan ADSs). To the extent that such distribution exceeds your adjusted tax basis, the distribution will be taxed as gain recognized on a sale or exchange of ChipMOS Taiwan ADSs. However, because ChipMOS Taiwan does not maintain calculations of its E&P under U.S. federal income tax principles, it is expected that distributions will generally be reported to U.S. Holders as dividends. Because ChipMOS Taiwan is not a U.S. corporation, no dividends-received deduction will be allowed to corporations with respect to dividends paid by it.

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For U.S. foreign tax credit limitation purposes, dividends received on ChipMOS Taiwan ADSs will be treated as foreign source income and will generally be “passive category income,” or in the case of certain holders, “general category income.” You may be eligible, subject to a number of complex limitations, to claim a foreign tax credit in respect of ROC taxes actually withheld on dividends paid on ChipMOS Taiwan ADSs. The rules governing U.S. foreign tax credits are complex, and we recommend that you consult your tax advisor regarding the applicability of such rules to you.

Sale, Exchange or Other Disposition of ChipMOS Taiwan ADSs

Subject to the PFIC rules discussed below, generally, in connection with the sale, exchange or other taxable disposition of ChipMOS Taiwan ADSs:

- you will recognize capital gain or loss equal to the difference (if any) between the amount realized on such sale, exchange or other taxable disposition and your adjusted tax basis in such ChipMOS Taiwan ADSs;
- such gain or loss will be long-term capital gain or loss if your holding period for such ChipMOS Taiwan ADSs is more than one year at the time of the sale or other disposition;
- such gain or loss will generally be treated as U.S. source for U.S. foreign tax credit purposes; and
- your ability to deduct capital losses is subject to limitations.

Long-term capital gains recognized by individuals and certain other non-corporate taxpayers are taxed at preferential rates.

Passive Foreign Investment Company (PFIC)

ChipMOS Taiwan does not expect to be a PFIC for its current taxable year or the foreseeable future. However, a company’s PFIC status is a legal and factual determination that must be made annually and thus may be subject to change. If ChipMOS Taiwan were treated as a PFIC, gain realized on the sale or other disposition of your ChipMOS Taiwan ADSs would in general not be treated as capital gain. Instead, such gain would be allocated ratably over your holding period for the ChipMOS Taiwan ADSs. The amounts allocated to the taxable year of the sale or other disposition and to any year before ChipMOS Taiwan became a PFIC would be taxed as ordinary income. The amount allocated to each other taxable year would be subject to tax at the highest rate in effect for such year, together with an interest charge on the tax attributable to each such year. If ChipMOS Taiwan were a PFIC for any year during a U.S. Holder’s holding period for ChipMOS Taiwan ADSs, it generally will continue to be treated as a PFIC with respect to the U.S. Holder for all succeeding years during which the U.S. Holder owns the ADSs. Dividends received from ChipMOS Taiwan ADSs will not be eligible for the special tax rates applicable to qualified dividend income for certain non-corporate U.S. Holders if ChipMOS Taiwan is treated as a PFIC with respect to the U.S. Holder, either in the taxable year of the distribution or the preceding taxable year, but instead will be taxable at rates applicable to ordinary income. Further, any distribution in respect of ChipMOS Taiwan ADSs in excess of 125 percent of the average annual distributions on ChipMOS Taiwan ADSs received by the U.S. Holder during the preceding three years or the U.S. Holder’s holding period, whichever is shorter, would be allocated ratably over the U.S. Holder’s holding period for ChipMOS Taiwan ADSs and subject to taxation as described with respect to sales or other dispositions above. Certain elections may be available that would result in alternative treatments such as mark-to-market treatment of the ADSs.

3.8% Medicare Tax on “Net Investment Income”

Certain U.S. Holders that are individuals, estates, and certain trusts are subject to a 3.8% tax on all or a portion of their “net investment income,” which may include any gain realized or amounts received with respect to their ChipMOS Taiwan ADSs, to the extent of their net investment income that, when added to other modified adjusted gross income, exceeds \$200,000 for a single taxpayer (or a qualifying head of household), \$250,000 for a married taxpayer filing a joint return (or a qualifying widower), or \$125,000 for a married taxpayer filing a separate return. U.S. Holders should consult their own tax advisor with respect to the applicability of the net investment income tax.

Information Reporting and Backup Withholding

Except in the case of corporations or other exempt holders, cash received by a U.S. Holder in connection with dividends, if any, paid by ChipMOS Taiwan may be subject to U.S. information reporting requirements and may be subject to backup withholding unless the U.S. Holder provides an accurate taxpayer identification number and complies with certain certification procedures or otherwise establishes an exemption from backup withholding. Backup withholding is not an additional tax and amounts withheld may be allowed as a credit against the U.S. Holder’s U.S. federal income tax liability and may entitle the U.S. Holder to a refund, provided that certain required information is timely furnished to the IRS.

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U.S. Holders who are individuals (and under proposed regulations, certain entities) and who own “specified foreign financial assets” with an aggregate value in excess of \$50,000 are generally required to file an information statement along with their tax returns, currently on IRS Form 8938, with respect to such assets. “Specified foreign financial assets” include securities issued by a non-U.S. issuer (which would include ChipMOS Taiwan ADSs) that are not held in accounts maintained by financial institutions. Higher reporting thresholds apply to certain individuals living abroad and to certain married individuals. Individuals who fail to report the required information could be subject to substantial penalties, and such individuals should consult their own tax advisors concerning the application of these rules to their investment in ChipMOS Taiwan ADSs.

TAX MATTERS CAN BE COMPLICATED. THE FOREGOING SUMMARY OF MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES IS NOT INTENDED TO BE A COMPLETE ANALYSIS OR DESCRIPTION OF ALL U.S. FEDERAL INCOME TAX CONSEQUENCES OF THE OWNERSHIP AND DISPOSITION OF CHIPMOS TAIWAN ADSs. IN ADDITION, THE SUMMARY DOES NOT ADDRESS TAX CONSEQUENCES THAT DEPEND UPON INDIVIDUAL CIRCUMSTANCES. THIS SUMMARY DOES NOT ADDRESS ANY U.S. FEDERAL TAX CONSEQUENCES OTHER THAN INCOME TAX OR ANY FOREIGN, STATE OR LOCAL TAX CONSIDERATIONS, NOR ANY TAX CONSEQUENCES OF ANY TRANSACTION OTHER THAN THE OWNERSHIP AND DISPOSITION OF CHIPMOS TAIWAN ADSs. ACCORDINGLY, YOU ARE STRONGLY URGED TO CONSULT YOUR OWN TAX ADVISOR TO DETERMINE THE PARTICULAR U.S. FEDERAL, STATE, LOCAL, OR FOREIGN INCOME OR OTHER TAX CONSEQUENCES OF THE OWNERSHIP AND DISPOSITION OF CHIPMOS TAIWAN ADSs TO YOU.

Non-U.S. Holders

If you are not a U.S. Holder (as defined above), you are a “Non-U.S. Holder”.

Distributions on Our ADSs

You generally will not be subject to U.S. federal income tax or withholding on distributions made on our ADSs unless:

- you conduct a trade or business in the United States, and
- the distributions are effectively connected with the conduct of that trade or business (and, if an applicable income tax treaty so requires as a condition for you to be subject to U.S. federal income tax on a profit for the year basis in respect of income from our ADSs, such distributions are attributable to a permanent establishment that you maintain in the United States).

If you meet the two tests above, you generally will be subject to tax in respect of such distributions in the same manner as a U.S. Holder, as described above. In addition, any effectively connected distributions received by a non-U.S. corporation may also, under certain circumstances, be subject to an additional “branch profits tax” at a 30 percent rate or such lower rate as may be specified by an applicable income tax treaty.

Sale, Exchange or Other Disposition of Our ADSs

Generally, you will not be subject to U.S. federal income tax or withholding in respect of gain recognized on a sale or other disposition of our ADSs unless:

- your gain is effectively connected with a trade or business that you conduct in the United States (and, if an applicable income tax treaty so requires as a condition for you to be subject to U.S. federal income tax on a profit for the year basis in respect of gain from the sale or other disposition of our ADSs, such gain is attributable to a permanent establishment that you maintain in the United States), or
- you are an individual Non-U.S. Holder and are present in the United States for at least 183 days in the taxable year of the sale or other disposition, and certain other conditions exist.

You will be subject to tax in respect of any gain effectively connected with your conduct of a trade or business in the United States generally in the same manner as a U.S. Holder, as described above. Effectively connected gains realized by a non-U.S. corporation may also, under certain circumstances, be subject to an additional “branch profits tax” at a rate of 30 percent or such lower rate as may be specified by an applicable income tax treaty.

Backup Withholding and Information Reporting

Payments, including distributions and proceeds of sales, in respect of our ADSs that are made in the United States or by a U.S.-related financial intermediary will be subject to U.S. information reporting rules. In addition, such payments may be subject to U.S. federal backup withholding. You will not be subject to backup withholding provided that:

- you are a corporation or other exempt recipient, or
- you provide your correct U.S. federal taxpayer identification number and certify, under penalties of perjury, that you are not subject to backup withholding.

Amounts withheld under the backup withholding rules may be credited against your U.S. federal income tax, and you may obtain a refund of any excess amounts withheld under the backup withholding rules by filing the appropriate claim for refund with the IRS in a timely manner.

Documents on Display

We are subject to the information requirements of the Securities Exchange Act of 1934, as amended. In accordance with these requirements, we file reports and other information with the SEC. These materials may be inspected and copied at the Commission's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. The public may obtain information on the operation of the Commission's Public Reference Room by calling the Commission in the United States at 1-800-SEC-0330. The Commission also maintains a web site at <http://www.sec.gov> that contains reports, proxy statements and other information regarding registrants that file electronically with the Commission.

Item 11. Quantitative and Qualitative Disclosure about Market Risk

Market Risks

Our exposure to financial market risks relates primarily to changes in interest rates and foreign exchange rates. To mitigate these risks, we utilize derivative financial instruments, the application of which is primarily for hedging, and not for speculative, purposes.

Interest Rate Risks

As of December 31, 2018, we had aggregate debts outstanding of NT\$9,790 million (US\$320 million), which was incurred for capital expenditure and general operating expenses. Of our outstanding debts as of December 31, 2018, 100% bear interest at variable rates. The interest rate for the majority of our variable rate debts varies based on a fixed percentage spread over the prime rate established by our lenders. Our variable rate debts had an annual weighted average interest rate of 1.7895% as of December 31, 2018. Accordingly, we have cash flows and earnings exposure due to market interest rate changes for our variable rate debts. An increase in interest rates of 1% would increase our annual interest charge by NT\$98 million (US\$3 million) based on our outstanding floating rate indebtedness as of December 31, 2018.

As of December 31, 2017 and 2018, we had no interest rate swap agreements outstanding.

Foreign Currency Exchange Rate Risks

Our foreign currency exposure gives rise to market risks associated with exchange rate movements against the NT dollar, the RMB, the Japanese yen and the US dollar. As of December 31, 2018, 53.6% of our financial assets and 9.1% of our financial liabilities are denominated in the RMB, US dollar and Japanese yen, respectively. We do not hold or issue any derivative for trading purposes or to hedge against fluctuations in foreign exchange rates. We mitigate this risk by conducting sales and purchases transactions in the same currency. These hedging transactions help to reduce, but do not eliminate, the impact of foreign currency exchange rate movements. An average appreciation of the NT dollar against all other relevant foreign currencies of 5% would decrease our exchange gain by NT\$204 million (US\$7 million) based on our outstanding assets and liabilities denominated in foreign currencies as of December 31, 2018. As of December 31, 2017 and 2018, we had no outstanding forward exchange or foreign currency option contracts.

See Note 35 of our audited consolidated financial statements for additional information on financial risk management.

Item 12. Description of Securities Other Than Equity Securities

American Depositary Shares

Depositary Fees

Under the terms of the Deposit Agreement for our ADSs, an ADS holder is required to pay the following service fees to the depositary bank:

<u>Service</u>	<u>Fees</u>
(1) Issuance of ADSs (i.e., an issuance upon a deposit of Shares or upon a change in the ADS(s)-to-Share(s) ratio), excluding issuances as a result of distributions described in paragraph (4) below.	Up to US\$5.00 per 100 ADS (or fraction thereof) issued.
(2) Cancellation of ADSs (i.e., a cancellation of ADSs for delivery of deposited Shares or upon a change in the ADS(s)-to-Share(s) ratio).	Up to US\$5.00 per 100 ADS (or fraction thereof) cancelled.
(3) Distribution of cash dividends or other cash distributions (i.e., upon a sale of rights and other entitlements).	Up to US\$5.00 per 100 ADS (or fraction thereof) held.
(4) Distribution of ADSs pursuant to (i) stock dividends or other free stock distributions, or (ii) an exercise of rights to purchase additional ADSs.	Up to US\$5.00 per 100 ADS (or fraction thereof) held.
(5) Distribution of securities other than ADSs or rights to purchase additional ADSs (i.e., spin-off shares).	Up to US\$5.00 per 100 ADS (or fraction thereof) held.
(6) ADS Services.	Up to US\$5.00 per 100 ADS (or fraction thereof) held on the applicable record date(s) established by the Depositary.

Depositary Charges

A holder of our ADSs is responsible to pay certain charges such as:

- (i) taxes (including applicable interest and penalties) and other governmental charges;
- (ii) such registration fees as may from time to time be in effect for the registration of Shares or other Deposited Securities on the share register and applicable to transfers of Shares or other Deposited Securities to or from the name of the Custodian, the Depositary or any nominees upon the making of deposits and withdrawals, respectively;
- (iii) such cable, telex and facsimile transmission and delivery expenses as are expressly provided in the Deposit Agreement to be at the expense of the person depositing Shares or withdrawing Deposited Securities or of the Holders and Beneficial Owners of ADSs;
- (iv) the expenses and charges incurred by the Depositary in the conversion of foreign currency;
- (v) such fees and expenses as are incurred by the Depositary in connection with compliance with exchange control regulations and other regulatory requirements applicable to Shares, Deposited Securities, ADSs and ADRs; and
- (vi) the fees and expenses incurred by the Depositary, the Custodian, or any nominee in connection with the servicing or delivery of Deposited Property.

All ADS fees and charges so payable may be deducted from distributions or must be remitted to the Depositary, or its designee, and may, at any time and from time to time, be changed by agreement between the Depositary and the Company, but, in the case of ADS fees and charges payable by Holders and Beneficial Owners, only in the manner contemplated in the Deposit Agreement. The Depositary shall provide, without charge, a copy of its latest ADS fee schedule to anyone upon request.

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ADS fees and charges payable upon (i) the issuance of ADSs and (ii) the cancellation of ADSs will be payable by the person to whom the ADSs are so issued by the Depositary (in the case of ADS issuances) and by the person who ADSs are being cancelled (in the case of ADS cancellations). In the case of ADSs issued by the Depositary into DTC or presented to the Depositary via DTC, the ADS issuance and cancellation fees and charges will be payable by the DTC Participant(s) receiving the ADSs from the Depositary or the DTC Participant(s) holding the ADSs being cancelled, as the case may be, on behalf of the Beneficial Owner(s) and will be charged by the DTC Participant(s) to the account(s) of the applicable Beneficial Owner(s) in accordance with the procedures and practices of the DTC participant(s) as in effect at the time. ADS fees and charges in respect of distributions and the ADS service fee are payable by Holders as of the applicable ADS Record Date established by the Depositary. In the case of distributions of cash, the amount of the applicable ADS fees and charges is deducted from the funds being distributed. In the case of (i) distributions other than cash and (ii) the ADS service fee, the applicable Holders as of the ADS Record Date established by the Depositary will be invoiced for the amount of the ADS fees and charges and such ADS fees may be deducted from distributions made to Holders. For ADSs held through DTC, the ADS fees and charges for distributions other than cash and the ADS service fee may be deducted from distributions made through DTC, and may be charged to the DTC Participants in accordance with the procedures and practices prescribed by DTC from time to time and the DTC Participants in turn charge the amount of such ADS fees and charges to the Beneficial Owners for whom they hold ADSs.

The Depositary may reimburse the Company for certain expenses incurred by the Company in respect of the ADR program established pursuant to the Deposit Agreement, by making available a portion of the ADS fees charged in respect of the ADR program or otherwise, upon such terms and conditions as the Company and the Depositary agree from time to time. The Company shall pay to the Depositary such fees and charges, and reimburse the Depositary for such out-of-pocket expenses, as the Depositary and the Company may agree from time to time. Responsibility for payment of such fees, charges and reimbursements may from time to time be changed by agreement between the Company and the Depositary. Unless otherwise agreed, the Depositary shall present its statement for such fees, charges and reimbursements to the Company once every three months. The charges and expenses of the Custodian are for the sole account of the Depositary.

The obligations of Holders and Beneficial Owners to pay ADS fees and charges shall survive the termination of the Deposit Agreement. As to any Depositary, upon the resignation or removal of such Depositary as described in the Deposit Agreement, the right to collect ADS fees and charges shall extend for those ADS fees and charges incurred prior to the effectiveness of such resignation or removal.

Depositary Payment

In 2018, we received US\$289.6 thousand from Citi Bank N.A., the Depositary for our ADR program. The table below sets forth details of the amount we received from Citi Bank N.A.

<u>Item</u>	<u>US\$ (in thousand)</u>
Reimbursement of Proxy Process Expenses	11.0
Reimbursement of Legal Fees	1.1
Direct reimbursement to issuer	289.6
Total Payments (1)	<u>301.7</u>

Note:
(1) Net of U.S. withholding tax.

PART II

Item 13. Defaults, Dividend, Arrearages and Delinquencies

None.

Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds

Not applicable.

Item 15. Controls and Procedures

Disclosure Controls and Procedures. Our management, including our President, the principal executive officer and Vice president of the Finance and Accounting Management Center, the principal financial officers, conducted an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Securities Exchange Act of 1934, as amended). Based upon that evaluation, our management concluded that, our disclosure controls and procedures were effective as of December 31, 2018.

Management's Annual Report on Internal Control Over Financial Reporting. Management's Annual Report on Internal Control Over Financial Reporting is set forth below.

Management's Report on Internal Control Over Financial Reporting

April 25, 2019

Management of ChipMOS TECHNOLOGIES INC. (together with its consolidated subsidiaries, the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) of the Securities Exchange Act of 1934, as amended). The Company's internal control over financial reporting is a process designed under the supervision of the Company's President, the principal executive officer, and Vice President of the Finance and Accounting Management Center, the principal financial officer, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Company's financial statements for external reporting purposes in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board. Our internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions and dispositions of our assets;
- provide reasonable assurance that our transactions are recorded as necessary to permit preparation of our financial statements in accordance with IFRS, and that our receipts and expenditures are being made only in accordance with authorizations of our management and our directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of internal control effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2018 based on the criteria set forth in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on the assessment, our management concludes that our internal control over financial reporting was effective as of December 31, 2018.

The effectiveness of our internal control over financial reporting as of December 31, 2018 has been audited by PricewaterhouseCoopers, Taiwan, an independent registered public accounting firm, as stated in their report included in this Annual Report on Form 20-F.

/s/ Shih-Jye Cheng

Name: Shih-Jye Cheng
Title: Chairman and President

/s/ Silvia Su

Name: Silvia Su
Title: Vice President, Finance and Accounting Management Center

Changes in Internal Control Over Financial Reporting. During the year ended December 31, 2018, there have been no changes in our internal control over financial reporting that may materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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Item 16A. Audit Committee Financial Expert

Our Board of Directors have determined that Chin-Shyh Ou, one of our independent directors, qualified as audit committee financial expert and meets the independence requirement as defined in Item 16A to Form 20-F.

Item 16B. Code of Ethics

We have adopted a Code of Ethics and Business Conduct, which applies to our employees and contract workers. A copy of our Code of Ethics and Business Conduct is filed as Exhibit 11.1 to this Annual Report on Form 20-F.

Item 16C. Principal Accountant Fees and Services

The table below summarizes the aggregate fees that we paid or accrued for services provided by PricewaterhouseCoopers, Taiwan (“PwC Taiwan”) for the years ended December 31, 2017 and 2018.

	<u>2017</u>	<u>2018</u>
	NT\$	NT\$
	(In thousands)	
Audit Fees	\$16,350	\$15,950
Audit Related Fees	200	200
Tax Fees	3,140	3,630
Total	<u>\$19,690</u>	<u>\$19,780</u>

Audit Fees. This category includes the audit of our annual financial statements and services that are provided by the independent auditors in connection with our annual financial statements, internal control over financial reporting, quarterly financial statements, and related statutory and regulatory filings.

Audit-Related Fees. This category includes fees reasonably related to the performance of the audit or review of our financial statements and not included in the category of Audit Fees (described above).

Tax Fees. This category includes aggregate fees for respective years for services relating to tax compliance, advice and planning.

All non-audit services are pre-approved by our Audit Committee on a case-by-case basis. Accordingly, we have not established any pre-approval policies and procedures.

All audit services that PwC Taiwan was engaged from August 28, 2015, the effective date of revised Rule 2-01(c)(7) of Regulation S-X entitled “Audit Committee Administration of the Engagement” on strengthening requirements regarding auditor independence, were pre-approved by the Audit Committee.

Item 16D. Exemptions from the Listing Standards for Audit Committees

Not applicable.

Item 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Repurchase Programs.

On August 10, 2015, the board of directors adopted on a share repurchase program to repurchase up to 20.0 million of our shares through open market transactions at a price no more than NT\$41.34 per share during the period from August 11, 2015 to October 10, 2015. On September 18, 2015, we completed this share repurchase program under which we repurchased 20.0 million shares for approximately NT\$634 million. The repurchased shares were retired and cancelled. (Repurchase Program I)

On February 4, 2016, the board of directors adopted on a share repurchase program to repurchase up to 15.0 million of our shares through open market transactions at a price no more than NT\$40.00 per share during the period from February 5, 2016 to April 4, 2016. The purpose for the above share repurchase is to boost the morale of the employees and therefore such repurchased shares will be transferred to the employees of the Company. On April 1, 2016, we completed this share repurchase program under which we repurchased 15.0 million shares for approximately NT\$511 million. (Repurchase Program II)

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On May 12, 2016, the board of directors adopted on a share repurchase program to repurchase up to 15.0 million of our shares through open market transactions at a price no more than NT\$40.00 per share during the period from May 13, 2016 to July 12, 2016. The purpose for the above share repurchase is to boost the morale of the employees and therefore such repurchased shares will be transferred to the employees of the Company. On July 1, 2016, we completed this share repurchase program under which we repurchased 15.0 million shares for approximately NT\$494 million. (Repurchase Program III)

Other repurchases.

On September 14, 2016, we repurchased 85 thousand shares from our dissenting shareholders in accordance with the Merger of the Company and ChipMOS Bermuda which was effective on October 31, 2016.

The table sets forth certain information about the purchase of our common shares by the Issuer's repurchase programs in the periods indicated.

Purchases of Equity Securities by the Issuer

Period	Total Number of Shares Purchased	Average Price Paid Per Share (NT\$)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (NT\$ Million)
August – September, 2015 (Repurchase Program I)				
August 2015	10,083,000			
September 2015	9,917,000			
	20,000,000	31.69	20,000,000	None
February – April, 2016 (Repurchase Program II)				
February 2016	3,990,000			
March 2016	10,556,000			
April 2016	454,000			
	15,000,000	34.05	15,000,000	None
May – July, 2016 (Repurchase Program III)				
May 2016	5,184,000			
June 2016	9,371,000			
July 2016	445,000			
	15,000,000	32.95	15,000,000	None
September 2016 (Other Repurchase)⁽¹⁾				
September 2016	85,000			
	85,000	31.10		Not Applicable
Total	50,085,000		50,000,000	

Note:

(1) The shares repurchased from our dissenting shareholders.

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Item 16F. Change in Registrant’s Certifying Accountant

Not applicable.

Item 16G. Corporate Governance

Our corporate governance practices are governed by the applicable ROC law, specifically, the ROC Company Act and Securities and Exchange Act, and our articles of incorporation. Also, because our securities are listed on the NASDAQ, we are subject to corporate governance requirements applicable to NASDAQ-listed foreign private issuers under NASDAQ listing rules.

Under NASDAQ Rule 5615(a)(3), NASDAQ-listed foreign private issuers may, in general, follow their home country corporate governance practices instead of most NASDAQ corporate governance requirements. However, all NASDAQ-listed, foreign private issuers must comply with NASDAQ Rules 5605(c)(2)(A)(ii), 5605(c)(3), 5625 and 5640.

Item 16G requires a foreign private issuer to provide in its annual report filed with the SEC a brief, general summary of any significant ways its corporate governance practices differ from those followed by NASDAQ-listed domestic companies. The table below provides this summary information as required by Item 16G and by NASDAQ Rule 5615(a) (3):

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NASDAQ Listing Rule

5250(b)(3)

Corporate Governance Practice To Be Followed by Domestic Companies

Disclosure of third party director and nominee compensation requirements.

Our Corporate Governance Practice

We follow governance practices under the ROC law. NASDAQ Rule 5250(b)(3) generally requires a NASDAQ-listed company to disclose at least annually material terms of agreements and arrangements with third parties (other than the company) relating to compensation of or payment to the company's directors in connection with candidacy or service as a company director, subject to certain limited exceptions. There is no similar regulation requiring disclosure of third party compensation of directors and nominees for director under the ROC law. However, certain laws and regulations are designed to enhance transparency by making investors aware of the relationship between independent directors or nominees for independent director of a TWSE-listed company and third party. For instance, the ROC Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies requires that, in the event that both of a TWSE-listed company and its group enterprises, and another company and its group enterprises, nominate any director, supervisor or managerial officer from the other company or its group enterprises as an independent director candidate, the TWSE-listed company shall disclose the information when receiving the nomination of an independent director candidate, and explain the competence of the independent director candidate. It further requires that, if the candidate becomes the TWSE-listed company's independent director through election, such company shall disclose the number of votes cast in favor of such independent director-elect. In addition, if an independent director of a TWSE-listed company concurrently serves as a director, supervisor or other position of other company, such concurrently held position shall be disclosed in the Market Observation Post System of the TWSE.

5605(b)

Requires a majority independent board and an independent director executive session.

We follow governance practices under the ROC law. We have five independent directors out of a total of eight directors on our board. Our standards in determining director independence substantially comply with the NASDAQ requirement, which include detailed tests for determining director independence.

5605(c)(1)

Audit committee charter requirements.

We follow governance practices under the ROC law.

5605(c)(2)(A)(ii)

Audit committee composition and independence requirements.

We follow the same NASDAQ listing rule governance practice as followed by domestic companies.

5605(c)(2)(A)(i),
(iii), (iv)

Audit committee financial sophistication requirements.

We follow the same NASDAQ listing rule governance practice as followed by domestic companies.

5605(c)(3)

Audit committee responsibilities and authority requirements.

We follow the same NASDAQ listing rule governance practice as followed by domestic companies.

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<u>NASDAQ Listing Rule</u>	<u>Corporate Governance Practice To Be Followed by Domestic Companies</u>	<u>Our Corporate Governance Practice</u>
5605(d), (e)	Requires independent director oversight of executive officer compensation and director nominations.	We follow the same NASDAQ listing rule governance practice regarding the compensation committee as followed by domestic companies. As for the director nominations, we follow governance practices under the ROC law. Under the ROC Company Act and the interpretations thereof, candidates to serve as directors are nominated either by the board of directors or by the shareholders.
5610	Requires a code of conduct for directors, officers and employees.	We follow governance practices under the ROC law. We have adopted the Code of Ethics and Business Conduct that satisfies the requirements promulgated by the TWSE, and applies to all employees, managerial officers and directors of our company. The details of the waiver of such Code for our directors and managerial officers will be disclosed in the Market Observation Post System of the TWSE.
5620	Annual shareholder meeting requirements.	We follow governance practices under the ROC law. We are required by the ROC Company Act and our articles of incorporation to hold a general meeting of our shareholders within six months following the end of each fiscal year, unless for specific legitimate reasons or approved otherwise by the relevant authorities. Further, a majority of the holders of all issued and outstanding common shares present at a shareholders' meeting constitutes a quorum for meetings of our shareholders.
5625	Requires an issuer to notify NASDAQ of any material noncompliance with the Rule 5600 series.	We follow the same NASDAQ listing rule governance practice as followed by domestic companies.
5630	Requires oversight of related party transactions.	We follow governance practices under the ROC law. According to NASDAQ Rule 5630(a), each company that is not a limited partnership shall conduct an appropriate review and oversight of all related party transactions for potential conflict of interest situations on an ongoing basis by the company's audit committee or another independent body of the board of directors. According to our Procedures for Acquisition or Disposal of Assets that satisfies the requirements promulgated by the FSC, any related party transaction exceeding a specified threshold shall be required to have an independent expert issue a fairness opinion, and be submitted to our audit committee for its review and approval.
5635	Circumstances that require shareholder approval.	We follow governance practices under the ROC law. According to NASDAQ Rule 5635(c), each issuer shall require shareholder approval when a stock option or purchase plan is to be established or materially amended or other equity compensation arrangement made or materially amended, pursuant to which stock may be acquired by officers, directors, employees, or consultants. However, under the corresponding domestic requirements under the ROC Company Act and the Securities and Exchange Act, the board of directors has authority, subject to the approval of the Securities and Futures Bureau of the FSC, to approve employee stock option plans and to grant options to employees pursuant to such plans.
5640	Shareholder voting rights requirements.	We follow the same NASDAQ listing rule governance practice as followed by domestic companies.

PART III

Item 17. Financial Statements

The Company has elected to provide the financial statements and related information specified in Item 18 in lieu of Item 17.

Item 18. Financial Statements

The financial statements and related information of the Company are located at pages F-1 to F-84.

Item 19. Exhibits

<u>Exhibits</u>	<u>Description</u>
1.1	Articles of Incorporation of ChipMOS TECHNOLOGIES INC. as amended on May 26, 2017. (English Translation). (5)
2.1	Form of the Deposit Agreement among ChipMOS TECHNOLOGIES INC., Citibank, N.A. and The Holders and Beneficial Owners of American Depositary Shares issued hereunder. (2)
4.1	Syndicated Loan Agreement, dated July 2, 2014, between ChipMOS TECHNOLOGIES INC. and Bank of Taiwan as the lead Arranger. (English Translation). (3)
4.2	Merger Agreement, dated November 12, 2014, between ChipMOS TECHNOLOGIES INC. and ThaiLin Semiconductor Corp. (English Translation) (3)
4.3	Share Subscription Agreement, dated December 11, 2015, between ChipMOS TECHNOLOGIES INC. and Tsinghua Unigroup Ltd. (English Translation). (1)
4.4	Strategic Alliance Agreement, dated December 11, 2015, between ChipMOS TECHNOLOGIES INC. and Tsinghua Unigroup Ltd. (English Translation). (1)
4.5	Agreement and Plan of Merger, dated January 21, 2106, between ChipMOS TECHNOLOGIES (Bermuda) LTD. and ChipMOS TECHNOLOGIES INC. (1)
4.6	Subscriber Joinder Agreement, dated February 25, 2016, between ChipMOS TECHNOLOGIES INC. and Tsinghua Unigroup Ltd. (English Translation). (1)
4.7	Share Subscription Agreement, dated February 25, 2016, between ChipMOS TECHNOLOGIES INC. and Tibet MaoYeChaungXin INVESTMENT CO., LIMITED (English Translation). (1)
4.8	Syndicated Loan Agreement, dated May 16, 2016, between ChipMOS TECHNOLOGIES INC. and, Land Bank of Taiwan Co., Ltd., Bank of Taiwan Co., Ltd. and Taiwan Cooperative Bank Co., Ltd. (English Translation). (4)
4.9	Termination Agreement, dated November 30, 2016, between ChipMOS TECHNOLOGIES INC. and Tsinghua Unigroup Ltd. (English Translation). (4)
4.10	Termination Agreement, dated November 30, 2016, between ChipMOS TECHNOLOGIES INC. and Tibet MaoYeChaungXin INVESTMENT CO., LIMITED. (English Translation). (4)
4.11	Equity Interest Transfer Agreement, dated November 30, 2016, among ChipMOS TECHNOLOGIES (BVI) LTD., Tibet Unigroup Guowei Investment Co., Ltd. and ChipMOS TECHNOLOGIES INC. (English Translation). (4)
4.12	Equity Interest Transfer Agreement, dated November 30, 2016, between ChipMOS TECHNOLOGIES (BVI) LTD. and Gongqingcheng Changhou Investment Management Ltd. (English Translation). (4)
4.13	Equity Interest Transfer Agreement, dated November 30, 2016, between ChipMOS TECHNOLOGIES (BVI) LTD. and Accretech (China) Co., Ltd. (English Translation). (4)
4.14	Equity Interest Transfer Agreement, dated November 30, 2016, between ChipMOS TECHNOLOGIES (BVI) LTD. and Chao-Jung Tsai (English Translation). (4)
4.15	Equity Interest Transfer Agreement, dated November 30, 2016, between ChipMOS TECHNOLOGIES (BVI) LTD. and Shanghai Zuzhu Business Consulting Partnership (Limited Partnership) (English Translation). (4)
4.16	Equity Interest Transfer Agreement, dated November 30, 2016, between ChipMOS TECHNOLOGIES (BVI) LTD. and Shih-Jye Cheng (English Translation). (4)

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Exhibits	Description
4.17	Equity Interest Transfer Agreement, dated November 30, 2016, between ChipMOS TECHNOLOGIES (BVI) LTD. and Shou-Kang Chen (English Translation),(4)
4.18	Equity Interest Transfer Agreement, dated November 30, 2016, between ChipMOS TECHNOLOGIES (BVI) LTD. and David W. Wang (English Translation),(4)
4.19	Agreement for Sino-Foreign Equity Joint Venture, dated November 30, 2016, among ChipMOS TECHNOLOGIES (BVI) LTD., Tibet Unigroup Guowei Investment Co., Ltd., Gongqingcheng Changhou Investment Management Ltd., Accretech (China) Co., Ltd., Chao-Jung Tsai, Shanghai Zuzhu Business Consulting Partnership (Limited Partnership), Shih-Jye Cheng, Shou-Kang Chen and David W. Wang (English Translation),(4)
4.20	Amendment of Agreement for Sino-Foreign Equity Joint Venture dated April 10, 2017, among ChipMOS TECHNOLOGIES (BVI) LTD., Tibet Unigroup Guowei Investment Co., Ltd., Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership), Accretech (China) Co., Ltd., Chao-Jung Tsai, Shanghai Zuzhu Business Consulting Partnership (Limited Partnership), Shih-Jye Cheng, Shou-Kang Chen and David W. Wang (English Translation)
4.21	Amendment of Agreement for Sino-Foreign Equity Joint Venture dated November 28, 2017, among ChipMOS TECHNOLOGIES (BVI) LTD., Tibet Unigroup Guowei Investment Co., Ltd., Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership), Accretech (China) Co., Ltd., Chao-Jung Tsai, Shanghai Zuzhu Business Consulting Partnership (Limited Partnership), Shih-Jye Cheng, Shou-Kang Chen and David W. Wang (English Translation)
4.22	Amendment of Agreement for Sino-Foreign Equity Joint Venture dated August 1, 2018, among ChipMOS TECHNOLOGIES (BVI) LTD., Tibet Unigroup Guowei Investment Co., Ltd., Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership), Accretech (China) Co., Ltd., Chao-Jung Tsai, Shanghai Zuzhu Business Consulting Partnership (Limited Partnership), Shih-Jye Cheng, Shou-Kang Chen and David W. Wang (English Translation)
4.23	Amendment of Agreement for Sino-Foreign Equity Joint Venture dated December 29, 2018, among ChipMOS TECHNOLOGIES (BVI) LTD., Beijing Unis Memory Technology Co., Ltd., Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership), Accretech (China) Co., Ltd., Chao-Jung Tsai, Shanghai Zuzhu Business Consulting Partnership (Limited Partnership), Shih-Jye Cheng, Shou-Kang Chen and David W. Wang (English Translation)
4.24	Amendment of Agreement for Sino-Foreign Equity Joint Venture dated February 1, 2019, among ChipMOS TECHNOLOGIES (BVI) LTD., Beijing Unis Memory Technology Co., Ltd., Accretech (China) Co., Ltd., Chao-Jung Tsai, Shanghai Zuzhu Business Consulting Partnership (Limited Partnership), Shih-Jye Cheng, Shou-Kang Chen and David W. Wang (English Translation)
4.25	Syndicated Loan Agreement, dated May 15, 2018, between ChipMOS TECHNOLOGIES INC. and, Taiwan Cooperative Bank Co., Ltd., Bank of Taiwan Co., Ltd., Land Bank of Taiwan Co., Ltd., Taishin International Bank Co., Ltd., Hun Nan Commercial Bank Co., Ltd., Chang Hwa Commercial Bank Co., Ltd. and Yuanta Commercial Bank Co., Ltd. (English Translation)
8.1	List of principal subsidiaries of ChipMOS TECHNOLOGIES INC.
11.1	Code of Ethics and Business Conduct (English Translation),(4)
12.1	Certification of Principal Executive Officer required by Rule 13a-14(a) under the Exchange Act.
12.2	Certification of Principal Financial Officer required by Rule 13a-14(a) under the Exchange Act.
13.1	Certification of Principal Executive Officer required by Rule 13a-14(b) under the Exchange Act.
13.2	Certification of Principal Financial Officer required by Rule 13a-14(b) under the Exchange Act.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

(1) Incorporated by reference to our Registration Statement on Form F-4 (File No. 333-209733), filed on February 26, 2016.

(2) Incorporated by reference to our Registration Statement on Form F-6/Amendment No. 1 (File No. 333-209736), filed on June 21, 2016.

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- (3) Incorporated by reference to the Annual Report on Form 20-F (File No. 0-31106) of ChipMOS TECHNOLOGIES (Bermuda) LTD., filed on April 24, 2015.
- (4) Incorporated by reference to the Annual Report on Form 20-F (File No. 001-37928) of ChipMOS TECHNOLOGIES INC., filed on April 20, 2017.
- (5) Incorporated by reference to the Annual Report on Form 20-F (File No. 001-37928) of ChipMOS TECHNOLOGIES INC., filed on April 19, 2018.

We have not included as exhibits certain instruments with respect to our debt, the amount of debt authorized under each of which does not exceed 10% of our total assets, and we agree to furnish a copy of any such instrument to the Commission upon request.

SIGNATURES

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the Registrant certifies that it meets all the requirements for filing on Form 20-F and it has duly caused this Annual Report on Form 20-F to be signed on its behalf by the undersigned, thereunto duly authorized, in Hsinchu, Taiwan, Republic of China, on April 25, 2019.

ChipMOS TECHNOLOGIES INC.

By: /s/ Shih-Jye Cheng

Name: Shih-Jye Cheng

Title: Chairman and President

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**ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
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ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of ChipMOS TECHNOLOGIES INC.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated statements of financial position of ChipMOS TECHNOLOGIES INC. (the “Company”) and its subsidiaries as of December 31, 2017 and 2018, and the related consolidated statements of comprehensive income, of changes in equity and of cash flows for each of the three years in the period ended December 31, 2018, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principles

As discussed in Note 41 and 42 to the consolidated financial statements, the Company changed the manner in which it accounts for financial instruments and the manner in which it accounts for revenue from contracts with customers in 2018.

Basis for Opinions

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Annual Report on Internal Control Over Financial Reporting appearing under Item 15. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Report of Independent Registered Public Accounting Firm

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers, Taiwan

Taipei, Taiwan
Republic of China
April 25, 2019

We have served as the Company's auditor since 2015.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Consolidated Statements of Comprehensive Income
For the years ended December 31, 2016, 2017 and 2018

	Note	2016 NT\$000	2017 NT\$000	2018 NT\$000	2018 US\$000
Revenue	4	18,387,593	17,940,855	18,480,027	603,725
Cost of revenue	5,17	<u>(14,745,472)</u>	<u>(14,703,729)</u>	<u>(15,050,032)</u>	<u>(491,670)</u>
Gross profit		3,642,121	3,237,126	3,429,995	112,055
Research and development expenses	5	(838,866)	(985,873)	(939,269)	(30,685)
Sales and marketing expenses	5	(72,918)	(64,397)	(53,451)	(1,746)
General and administrative expenses	5	(822,068)	(639,809)	(485,068)	(15,847)
Other operating income (expenses), net	6	90,306	692,834	147,514	4,819
Operating profit		1,998,575	2,239,881	2,099,721	68,596
Finance costs	7	(179,116)	(217,283)	(190,248)	(6,215)
Share of profit (loss) of associates		28,924	(179,491)	(300,101)	(9,804)
Other non-operating income (expenses), net	8	(147,948)	(310,691)	173,070	5,654
Profit before income tax		1,700,435	1,532,416	1,782,442	58,231
Income tax expense	9	(177,120)	(550,487)	(456,618)	(14,918)
Profit from continuing operations		1,523,315	981,929	1,325,824	43,313
Profit (loss) from discontinued operations	20	(122,105)	1,814,953	—	—
Profit for the year		1,401,210	2,796,882	1,325,824	43,313
Other comprehensive income (loss):					
<i>Other comprehensive income (loss) that will be reclassified to profit or loss in subsequent periods:</i>					
Exchange differences on translation of foreign operations		(200,280)	(232,652)	(51,077)	(1,668)
Share of other comprehensive income of associates that will be reclassified to profit or loss		—	678	—	—
Net other comprehensive loss that will be reclassified to profit or loss in subsequent periods		(200,280)	(231,974)	(51,077)	(1,668)
<i>Other comprehensive income (loss) that will not be reclassified to profit or loss in subsequent periods:</i>					
Other comprehensive income (loss) on remeasurements of defined benefit plans	25	(43,383)	50,838	(59,961)	(1,959)
Unrealized gain on valuation of equity instruments at fair value through other comprehensive income	13	—	—	85,022	2,778
Share of other comprehensive loss of associates that will not be reclassified to profit or loss		(133)	(124)	(2,687)	(88)
Income tax effect that will not be reclassified to profit or loss	9	7,375	(8,642)	(4,126)	(135)
Net other comprehensive income (loss) that will not be reclassified to profit or loss in subsequent periods		(36,141)	42,072	18,248	596
Other comprehensive loss for the year, net of income tax		(236,421)	(189,902)	(32,829)	(1,072)
Total comprehensive income for the year, net of income tax		1,164,789	2,606,980	1,292,995	42,241

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Consolidated Statements of Comprehensive Income (Continued)
For the years ended December 31, 2016, 2017 and 2018

	Note	2016 NT\$000	2017 NT\$000	2018 NT\$000	2018 US\$000
Profit (loss) attributable to:					
Equity holders of the Company					
- Continuing operations		1,829,327	981,929	1,325,824	43,313
- Discontinued operations		(122,105)	1,814,953	—	—
Predecessors' interests		(306,012)	—	—	—
		<u>1,401,210</u>	<u>2,796,882</u>	<u>1,325,824</u>	<u>43,313</u>
Total comprehensive income (loss) attributable to:					
Equity holders of the Company					
- Continuing operations		1,788,878	1,079,672	1,292,995	42,241
- Discontinued operations		(318,077)	1,527,308	—	—
Predecessors' interests		(306,012)	—	—	—
		<u>1,164,789</u>	<u>2,606,980</u>	<u>1,292,995</u>	<u>42,241</u>
Basic earnings per share:					
	10				
Equity holders of the Company					
- Continuing operations		NT\$ 2.13	NT\$ 1.16	NT\$ 1.65	US\$ 0.05
- Discontinued operations		(0.14)	2.14	—	—
Equity holders of the Company		1.99	3.30	1.65	0.05
Predecessors' interests		(0.35)	—	—	—
		<u>NT\$ 1.64</u>	<u>NT\$ 3.30</u>	<u>NT\$ 1.65</u>	<u>US\$ 0.05</u>
Diluted earnings per share:					
	10				
Equity holders of the Company					
- Continuing operations		NT\$ 2.11	NT\$ 1.13	NT\$ 1.63	US\$ 0.05
- Discontinued operations		(0.14)	2.10	—	—
Equity holders of the Company		1.97	3.23	1.63	0.05
Predecessors' interests		(0.35)	—	—	—
		<u>NT\$ 1.62</u>	<u>NT\$ 3.23</u>	<u>NT\$ 1.63</u>	<u>US\$ 0.05</u>
Basic earnings per equivalent ADS:					
Equity holders of the Company					
- Continuing operations		NT\$ 42.56	NT\$ 23.20	NT\$ 33.03	US\$ 1.08
- Discontinued operations		(2.84)	42.87	—	—
Equity holders of the Company		39.72	66.07	33.03	1.08
Predecessors' interests		(7.12)	—	—	—
		<u>NT\$ 32.60</u>	<u>NT\$ 66.07</u>	<u>NT\$ 33.03</u>	<u>US\$ 1.08</u>
Diluted earnings per equivalent ADS:					
Equity holders of the Company					
- Continuing operations		NT\$ 42.21	NT\$ 22.68	NT\$ 32.59	US\$ 1.06
- Discontinued operations		(2.82)	41.93	—	—
Equity holders of the Company		39.39	64.61	32.59	1.06
Predecessors' interests		(7.06)	—	—	—
		<u>NT\$ 32.33</u>	<u>NT\$ 64.61</u>	<u>NT\$ 32.59</u>	<u>US\$ 1.06</u>

Details of dividend to equity holders of the Company for the years are set out in Note 11 to the consolidated financial statements.
The accompanying notes are an integral part of the consolidated financial statements.

[Table of Contents](#)**ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES**
Consolidated Statements of Financial Position
December 31, 2017 and 2018

	<u>Note</u>	<u>December 31,</u> <u>2017</u>	<u>December 31,</u> <u>2018</u>	<u>December 31,</u> <u>2018</u>
		<u>NT\$000</u>	<u>NT\$000</u>	<u>US\$000</u>
Assets				
Non-current assets				
Available-for-sale financial assets		20,890	—	—
Non-current financial assets at fair value through profit or loss	12	—	11,471	375
Non-current financial assets at fair value through other comprehensive income	13	—	174,357	5,696
Investment in associates	14	3,433,332	3,863,741	126,225
Non-current financial assets at amortized cost	15,34	—	99,103	3,237
Property, plant and equipment, net	16,34	15,265,311	16,819,621	549,481
Deferred tax assets	9	212,372	226,716	7,407
Refundable deposits		21,342	22,006	719
Other non-current financial assets	34	70,241	—	—
Other non-current assets		35,474	28,560	933
		<u>19,058,962</u>	<u>21,245,575</u>	<u>694,073</u>
Current assets				
Inventories	17	1,929,239	1,778,835	58,113
Current financial assets at amortized cost	15	—	169,168	5,526
Current contract assets	4	—	299,835	9,795
Accounts and notes receivable	18	4,015,734	4,747,288	155,090
Accounts receivable – related parties		11	140	5
Other receivables	18	56,716	63,037	2,059
Other receivables – related parties		4,534	3,131	102
Current tax assets		104,906	139,595	4,561
Prepayments		54,126	44,592	1,457
Cash and cash equivalents	19	8,035,714	4,642,522	151,667
		<u>14,200,980</u>	<u>11,888,143</u>	<u>388,375</u>
Total assets		<u>33,259,942</u>	<u>33,133,718</u>	<u>1,082,448</u>

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ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Consolidated Statements of Financial Position (Continued)
December 31, 2017 and 2018

	Note	December 31, 2017 NT\$000	December 31, 2018 NT\$000	December 31, 2018 US\$000
Equity and liabilities				
Capital and reserves				
Issued capital	21	8,862,971	7,528,577	245,952
Capital surplus	22	6,271,448	6,263,553	204,625
Retained earnings	22			
Legal reserve		1,166,517	1,469,170	47,996
Unappropriated retained earnings		2,815,966	3,602,663	117,696
Other reserve				
Foreign currency translation reserve		65,593	14,516	474
Unrealized gain on valuation of available-for-sale financial assets		678	—	—
Unrealized gain on valuation of financial assets at fair value through other comprehensive income		—	106,898	3,492
Unearned employee awards		(54,570)	(1,701)	(56)
Treasury stock	23	(1,007,654)	(962,503)	(31,444)
Total equity		18,120,949	18,021,173	588,735
Non-current liabilities				
Long-term bank loans	24,32,34	7,498,853	9,042,096	295,397
Long-term deferred revenue	33	24,898	—	—
Long-term lease obligations payable		18,057	—	—
Deferred tax liabilities	9	174,293	308,759	10,087
Net defined benefit liability, non-current	25	478,526	520,765	17,013
Guarantee deposits	32	1,371	1,092	35
		<u>8,195,998</u>	<u>9,872,712</u>	<u>322,532</u>
Current liabilities				
Current contract liabilities				
Accounts payable		687,960	637,271	20,819
Accounts payable – related parties		226	347	11
Payables to contractors and equipment suppliers		713,313	1,516,735	49,550
Other payables	26	1,980,182	1,678,482	54,835
Other payables – related parties		36	218	7
Current tax liabilities		273,177	546,342	17,849
Current provisions	27	127,311	29,352	959
Receipts in advance		5,209	1,013	33
Other current liabilities		31,275	30,800	1,006
Current refund liabilities	28	—	32,627	1,066
Long-term lease obligations payable, current portion		11,785	17,792	581
Long-term bank loans, current portion	24,32,34	2,143,168	747,422	24,418
Short-term bank loans	29,32	969,353	—	—
		<u>6,942,995</u>	<u>5,239,833</u>	<u>171,181</u>
Total liabilities		15,138,993	15,112,545	493,713
Total equity and liabilities		33,259,942	33,133,718	1,082,448

The accompanying notes are an integral part of the consolidated financial statements.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Consolidated Statements of Changes in Equity
For the years ended December 31, 2016, 2017 and 2018

	Attributable to equity holders of the Company										Total equity	
	Retained earnings (Note 22)					Other reserve						
	Issued capital (Note 21)	Capital surplus (Note 22)	Legal reserve	Unappropriated retained earnings	Foreign currency translation reserve	Amounts recognized in other comprehensive income and accumulated in equity relating to non-current assets held for sale	Unearned employee awards	Treasury stock (Note 23)	Total	Equity attributable to predecessors' interests		
NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	
January 1, 2016 (Adjusted)	8,962,066	3,755,849	914,790	5,657,837	63,668	—	(447,323)	—	—	18,906,887	2,127,532	21,034,419
Profit (loss) for the year	—	—	—	1,707,222	—	—	—	—	—	1,707,222	(306,012)	1,401,210
Other comprehensive loss for the year	—	—	—	(36,141)	(200,280)	—	—	—	—	(236,421)	—	(236,421)
Total comprehensive income (loss)	—	—	—	1,671,081	(200,280)	—	—	—	—	1,470,801	(306,012)	1,164,789
Appropriations of prior year's earnings:												
Legal reserve (Note 22)	—	—	223,047	(223,047)	—	—	—	—	—	—	—	—
Cash dividends (Note 22)	—	—	—	(1,792,553)	—	—	—	—	(1,792,553)	—	—	(1,792,553)
Share-based payments	—	56,689	—	—	—	—	—	—	56,689	(128,602)	—	(71,913)
Restricted shares	4,347	10,755	—	14	—	—	—	—	262,235	—	—	262,235
Repurchase of shares (Note 23)	—	—	—	—	—	—	—	(1,007,654)	(1,007,654)	—	—	(1,007,654)
Reclassification to equity related to non-current assets held for sale	—	—	—	—	(287,645)	287,645	—	—	—	—	—	—
Effect of capital reorganization (Note 31)	(96,750)	3,065,533	—	(5,052,343)	434,857	—	—	—	(1,648,703)	(1,692,918)	—	(3,341,621)
December 31, 2016	8,869,663	6,888,826	1,137,837	260,989	10,600	287,645	(200,204)	(1,007,654)	16,247,702	—	—	16,247,702

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Consolidated Statements of Changes in Equity (Continued)
For the years ended December 31, 2016, 2017 and 2018

	Attributable to equity holders of the Company										
	Retained earnings (Note 22)					Other reserve					Total equity
	Issued capital (Note 21)	Capital surplus (Note 22)	Legal reserve	Unappropriated retained earnings	Foreign currency translation reserve	Amounts recognized in other comprehensive income (loss) and accumulated in equity relating to non-current assets held for sale	Unrealized gain on valuation of available-for-sale financial assets	Unearned employee awards	Treasury stock (Note 23)		
NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000		
January 1, 2017	8,869,663	6,888,826	1,137,837	260,989	10,600	287,645	—	(200,204)	(1,007,654)	16,247,702	
Profit for the year	—	—	—	2,796,882	—	—	—	—	—	2,796,882	
Other comprehensive income (loss) for the year	—	—	—	42,072	(232,652)	—	678	—	—	(189,902)	
Total comprehensive income (loss)	—	—	—	2,838,954	(232,652)	—	678	—	—	2,606,980	
Appropriations of prior year's earnings:											
Legal reserve (Note 22)	—	—	28,680	(28,680)	—	—	—	—	—	—	
Cash dividends (Notes 11 and 22)	—	—	—	(257,026)	—	—	—	—	—	(257,026)	
Cash distribution from capital surplus (Notes 11 and 22)	—	(599,728)	—	—	—	—	—	—	—	(599,728)	
Restricted shares	(6,692)	(17,650)	—	1,729	—	—	—	145,634	—	123,021	
Effect of disposal of subsidiary	—	—	—	—	287,645	(287,645)	—	—	—	—	
December 31, 2017	8,862,971	6,271,448	1,166,517	2,815,966	65,593	—	678	(54,570)	(1,007,654)	18,120,949	

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ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Consolidated Statements of Changes in Equity (Continued)
For the years ended December 31, 2016, 2017 and 2018

	Attributable to equity holders of the Company											
	Retained earnings (Note 22)				Other reserve						Treasury stock (Note 23)	Total equity
	Issued capital (Note 21)	Capital surplus (Note 22)	Legal reserve	Unappropriated retained earnings	Foreign currency translation reserve	Unrealized gain on valuation of financial assets at fair value through other comprehensive income	Unrealized gain on valuation of available-for-sale financial assets	Unearned employee awards				
NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000	NT\$000		
January 1, 2018	8,862,971	6,271,448	1,166,517	2,815,966	65,593	—	678	(54,570)	(1,007,654)	18,120,949		
Effects on initial application of IFRS 9 and IFRS 15	—	—	—	65,050	—	42,843	(678)	—	—	107,215		
January 1, 2018 (Adjusted)	8,862,971	6,271,448	1,166,517	2,881,016	65,593	42,843	—	(54,570)	(1,007,654)	18,228,164		
Profit for the year	—	—	—	1,325,824	—	—	—	—	—	1,325,824		
Other comprehensive income (loss) for the year	—	—	—	(45,807)	(51,077)	64,055	—	—	—	(32,829)		
Total comprehensive income (loss)	—	—	—	1,280,017	(51,077)	64,055	—	—	—	1,292,995		
Appropriations of prior year's earnings:												
Legal reserve (Note 22)	—	—	302,653	(302,653)	—	—	—	—	—	—		
Cash dividends (Notes 11 and 22)	—	—	—	(256,806)	—	—	—	—	—	(256,806)		
Restricted shares	(4,948)	(7,967)	—	1,089	—	—	—	52,869	—	41,043		
Capital reduction	(1,329,446)	72	—	—	—	—	—	—	45,151	(1,284,223)		
December 31, 2018	7,528,577	6,263,553	1,469,170	3,602,663	14,516	106,898	—	(1,701)	(962,503)	18,021,173		

The accompanying notes are an integral part of the consolidated financial statements.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Consolidated Statements of Cash Flows
For the years ended December 31, 2016, 2017 and 2018

	<u>Note</u>	<u>2016</u> <u>NT\$000</u>	<u>2017</u> <u>NT\$000</u>	<u>2018</u> <u>NT\$000</u>	<u>2018</u> <u>US\$000</u>
Cash flows from operating activities					
Profit before income tax – continuing operations		1,700,435	1,532,416	1,782,442	58,231
Profit (loss) before income tax – discontinued operations	20	(122,105)	1,814,953	—	—
Profit before income tax including discontinued operations		1,578,330	3,347,369	1,782,442	58,231
Adjustments to reconcile profit before income tax to net cash flows :					
Depreciation of property, plant and equipment	16	3,228,441	2,899,278	3,376,579	110,310
Amortization of assets		2,838	—	—	—
Allowance (reversal) for impairment of accounts and notes receivable		87	(87)	—	—
Expected credit losses		—	—	348	12
Interest expense		145,151	192,839	152,416	4,979
Interest income		(42,307)	(53,587)	(49,971)	(1,633)
Dividend income	8	—	—	(571)	(19)
Impairment of property, plant and equipment	16	8,198	956	—	—
Gain on valuation of financial assets at fair value through profit or loss	8	—	(637)	(1,485)	(49)
Gain on disposal of property, plant and equipment, net		(6,839)	(132,774)	(14,274)	(466)
Gain on disposal of a subsidiary	20	—	(1,843,234)	—	—
Insurance compensation income	6	—	(486,858)	(147)	(5)
Share of (profit) loss of associates	4,14	(28,924)	179,491	300,101	9,804
Gain on disposal of long-term investment in associates	8	—	(16,929)	—	—
Donations		127	—	—	—
Share-based payments	5	356,463	123,021	41,043	1,341
Deferred revenue		(2,403)	(11,995)	(42,857)	(1,400)
Changes in operating assets and liabilities:					
Current contract assets		—	—	(44,858)	(1,465)
Accounts and notes receivable		(480,348)	127,800	(733,695)	(23,969)
Accounts receivable – related parties		—	(240)	(129)	(4)
Other receivables		(124,226)	(15,644)	5,238	171
Other receivables – related parties		—	35,855	16,317	533
Inventories		(347,133)	(63,910)	(58,101)	(1,898)
Prepayments		12,291	126,708	46,781	1,528
Other financial assets		17,243	1,600	—	—
Financial assets at fair value through profit or loss		—	637	1,447	47
Other non-current assets		6,914	6,914	6,914	226
Current contract liabilities		—	—	280	9
Accounts payable		215,555	(147,859)	(50,689)	(1,656)
Accounts payable – related parties		—	263	121	4
Other payables		(249,607)	438,682	(301,711)	(9,857)
Other payables – related parties		—	(43,144)	182	6
Current provisions		(16,184)	46,592	(27,803)	(908)
Receipts in advance		2,150	(5,913)	—	—
Current refund liabilities		—	—	(37,529)	(1,226)
Other current liabilities		22,878	(15,469)	(475)	(16)
Net defined benefit liability, non-current		(15,886)	(17,604)	(17,722)	(579)
Cash generated from operations		4,282,809	4,672,121	4,348,192	142,051
Interest received		44,413	47,815	48,590	1,587
Dividend received		5,730	14,325	6,184	202
Interest paid		(145,668)	(189,381)	(154,307)	(5,041)
Income tax paid		(499,293)	(387,590)	(119,473)	(3,903)
Net cash generated from operating activities		3,687,991	4,157,290	4,129,186	134,896

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Consolidated Statements of Cash Flows (Continued)
For the years ended December 31, 2016, 2017 and 2018

	Note	2016 NT\$000	2017 NT\$000	2018 NT\$000	2018 US\$000
Cash flows from investing activities					
Proceeds from disposal of property, plant and equipment		59,134	306,634	18,160	593
Proceeds from insurance compensation		—	486,858	147	5
Net cash flow from disposal of a subsidiary	32	—	1,781,213	—	—
Acquisition of property, plant and equipment	32	(4,471,465)	(4,682,705)	(4,154,198)	(135,714)
Acquisition of available-for-sale financial assets		—	(10,940)	—	—
Acquisition of investment in associate	14	—	(1,373,486)	(794,694)	(25,962)
Decrease (increase) in refundable deposits		407	(11)	(664)	(21)
Increase in other non-current assets	32	(139,304)	—	—	—
Increase in financial assets at amortized cost		—	—	(198,030)	(6,469)
Increase in other financial assets		(5,466)	(964)	—	—
Net cash used in investing activities		(4,556,694)	(3,493,401)	(5,129,279)	(167,568)
Cash flows from financing activities					
Proceeds from short-term bank loans		3,820,594	5,560,354	1,053,202	34,407
Payments on short-term bank loans		(4,969,469)	(4,278,518)	(2,022,555)	(66,075)
Proceeds from long-term bank loans		10,560,000	148,829	12,663,550	413,706
Payments on long-term bank loans		(6,200,567)	(1,124,699)	(12,553,300)	(410,104)
Decrease in guarantee deposits	32	(44)	(33)	(279)	(9)
Payments on repurchase of shares	23	(1,007,654)	—	—	—
Cash paid in respect of share-based payments		(292,623)	—	—	—
Cash dividend	11,22	(1,792,553)	(257,026)	(256,806)	(8,390)
Cash distribution from capital surplus	11	—	(599,728)	—	—
Payments on capital reduction		—	—	(1,284,223)	(41,954)
Payments on capital reorganization	31,32	(3,341,621)	—	—	—
Net cash used in financing activities		(3,223,937)	(550,821)	(2,400,411)	(78,419)
Net increase (decrease) in cash and cash equivalents		(4,092,640)	113,068	(3,400,504)	(111,091)
Effect of foreign exchange rate changes		(73,447)	(38,617)	7,312	239
Cash and cash equivalents at beginning of year	19	12,127,350	7,961,263	8,035,714	262,519
Cash and cash equivalents at end of year	19	<u>7,961,263</u>	<u>8,035,714</u>	<u>4,642,522</u>	<u>151,667</u>

The accompanying notes are an integral part of the consolidated financial statements.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements
December 31, 2016, 2017 and 2018

1. Corporate and group information

ChipMOS TECHNOLOGIES INC. (the “Company” or “ChipMOS Taiwan”) was incorporated in the Republic of China (“ROC”) on July 28, 1997. The Company and its subsidiaries (collectively referred herein as the “Group”) are primarily engaged in the research, development, manufacturing and sale of high-integration and high-precision integrated circuits and related assembly and testing services. On April 11, 2014, the Company’s shares were listed on the Taiwan Stock Exchange (“TWSE”). On November 1, 2016, the Company’s American Depositary Shares (“ADSs”) was listed on the NASDAQ Global Select Market and traded under the ticker symbol “IMOS”.

As of October 31, 2016, the former parent company, ChipMOS TECHNOLOGIES (Bermuda) LTD. (“ChipMOS Bermuda”) owned 60.25% of ChipMOS Taiwan’s outstanding shares, was merged with and into ChipMOS Taiwan, with the latter being the surviving company after the merger, pursuant to the agreement and plan of merger, dated January 21, 2016, by and between ChipMOS Bermuda and ChipMOS Taiwan (the “Merger”). Detailed information about the capital reorganization is provided in Note 2 cc).

As of November 30, 2016, the Board of Directors of the Company approved an agreement to form a joint-venture between the Company and Tsinghua Unigroup Ltd. (“Tsinghua Unigroup”). Under the joint-venture agreement, ChipMOS TECHNOLOGIES (BVI) LTD. (“ChipMOS BVI”), a wholly-owned subsidiary of ChipMOS Taiwan, sold 54.98% of the equity interests of its wholly-owned subsidiary, Unimos Microelectronics (Shanghai) Co., Ltd. (“Unimos Shanghai”) formerly known as ChipMOS TECHNOLOGIES (Shanghai) LTD. and renamed in July 2018, to a group led by Tsinghua Unigroup (“strategic investors”). After the consummation of such equity interest transfer, ChipMOS BVI owns 45.02% of the equity interests of Unimos Shanghai. As of December 31, 2016, the assets, liabilities and equity related to Unimos Shanghai have been reclassified as held for sale and presented as discontinued operations for satisfying the definition of discontinued operations. The equity transfer was completed in March 2017. Please see Note 20 for detailed information.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

2. Basis of preparation of financial statements and principal accounting policies

a) Basis of preparation

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (“IFRSs”), which collective term includes all applicable individual IFRSs, International Accounting Standards (“IASs”) issued by the International Accounting Standards Board (“IASB”) and Interpretations issued by the International Financial Reporting Interpretations Committee (“IFRIC”) of the IASB.

The consolidated financial statements have been prepared on a historical cost basis, except for the following items:

- (a) Financial assets at fair value through profit or loss (including derivative instruments).
- (b) Financial assets at fair value through other comprehensive income.
- (c) Defined benefit liabilities were recognized based on the net amount of pension fund assets less the present value of benefit obligation.

These consolidated financial statements are presented in New Taiwan dollars (“NT\$”), which is the Company’s functional currency.

b) New and amended standards adopted by the group

<u>New Standards, Interpretations and Amendments</u>	<u>Effective date issued by IASB</u>
IFRS 9, “Financial Instruments”	January 1, 2018
IFRS 15, “Revenue from Contracts with Customers”	January 1, 2018

(a) IFRS 9 “Financial Instruments”

- (i) Debt instruments are classified as financial assets measured at the fair value through profit or loss, financial assets measured at fair value through other comprehensive income or financial assets measured at amortized cost according to the characteristics of the entity’s business model and the contractual cash flows. Equity instruments are classified as financial assets measured at the fair value through profit or loss, unless an entity irrevocably designates an investment in equity instruments that is not held for trading as measured at fair value through other comprehensive income.
- (ii) The expected loss model is used to assess the impairment losses of debt instruments. The 12 months expected credit loss or lifetime expected credit loss is adopted if the credit risk of a financial instrument has increased significantly since the initial recognition at each statement of financial position date. Unless the instrument has been impaired, the interest income is calculated on the gross carrying amount of the asset; if the instrument has been impaired, the interest income after the impairment is calculated based on the book value (net of allowance) of the asset. The Group shall always measure the loss allowance at an amount equal to lifetime expected credit losses for trade receivables that do not contain a significant financing component.
- (iii) IFRS 9 “Financial Instruments” (“IFRS 9”) replaces the provisions of IAS 39 “Financial Investments” (“IAS 39”) that relate to the recognition, classification and measurement of financial assets and financial liabilities, derecognition of financial instruments, impairment of financial assets and hedge accounting. The new accounting policies are set out in Note 2 j). In accordance with the transitional provisions in IFRS 9, comparative figures have not been restated with the exception of certain aspects of hedge accounting.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

2. Basis of preparation of financial statements and principal accounting policies (continued)

b) New and amended standards adopted by the group (continued)

(a) IFRS 9 “Financial Instruments” (continued)

(iv) The application of IFRS 9 from January 1, 2018 resulted in changes in accounting policies and adjustments to the amounts recognized in the financial statements. Please refer to Note 41 for the details of significant effects as of January 1, 2018 on applying the aforementioned new standard.

(b) IFRS 15 “Revenue from Contracts with Customers” and amendments

(i) IFRS 15 “Revenue from Contracts with Customers” (“IFRS 15”) replaces IAS 11 “Construction Contracts”, IAS 18 “Revenue” and relevant interpretations. According to IFRS 15, revenue is recognized when a customer obtains control of promised goods or services. A customer obtains control of goods or services when a customer has the ability to direct the use of, and obtain substantially all of the remaining benefits from, the asset.

(ii) The core principle of IFRS 15 is that an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. An entity recognizes revenue in accordance with that core principle by applying the following five steps:

Step 1: Identify the contract(s) with a customer.

Step 2: Identify the performance obligations in the contract(s).

Step 3: Determine the transaction price.

Step 4: Allocate the transaction price to the performance obligations in the contract(s).

Step 5: Recognize revenue when (or as) the entity satisfies the performance obligation.

Furthermore, IFRS 15 includes a set of comprehensive disclosure requirements that requires an entity to disclose sufficient information to enable users of financial statements to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers.

(iii) When applying IFRS 15 effective from January 1, 2018, the Group intends not to restate the financial statements of prior period, the cumulative impact of the application was recognized as retained earnings as of January 1, 2018. The Group applied IFRS 15 only to incomplete contracts as of January 1, 2018. The new accounting policies are set out in Note 2 s). Please refer to Note 42 for the details of significant effects as of January 1, 2018 on applying the aforementioned new standard.

c) New and revised International Financial Reporting Standards not yet adopted

Amendments to IFRSs which have been published but are not mandatory for the financial year ending December 31, 2018 are not expected to have a material impact on the Group. Major Amendment to IFRSs that are not yet effective are listed below:

New Standards, Interpretations and Amendments
IFRS 16, “Leases”

Effective date issued by
IASB
January 1, 2019

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

2. Basis of preparation of financial statements and principal accounting policies (continued)

c) New and revised International Financial Reporting Standards not yet adopted (continued)

IFRS 16, "Leases", supersedes IAS 17, "Leases" and related interpretations. The standard requires lessees to recognize a right-of-use asset and a lease liability (except for those leases with terms of 12 months or less and leases of low-value assets). The accounting treatment is the same for lessors, who classify their leases as either finance leases or operating leases and account for those two types of leases differently. IFRS 16 only requires enhanced disclosures to be provided by lessors.

The Group has reported its preliminary assessment to the Board of Directors in the fourth quarter of 2018 and determined IFRS 16 will have significant impact on the Group's financial position. The Group intends to apply the simplified transition approach and will not restate comparative amounts for the years prior to first adoption.

In applying IFRS 16 for the first time, the Group has used the following practical expedients permitted by the standard:

- the use of a single discount rate to a portfolio of leases with reasonably similar characteristics,
- the accounting for operating leases with a remaining lease term of less than 12 months as of January 1, 2019 as short-term leases,
- the use of hindsight in determining the lease term where the contract contains options to extend or terminate the lease.

At the date of January 1, 2019, the Group considers to adopt the modified retrospective transitional provisions of IFRS 16, and expected to increase right-of-use asset and lease liabilities by NT\$898,387 thousand (US\$29,349 thousand) and NT\$884,275 thousand (US\$28,888 thousand), respectively; and decrease lease asset by NT\$31,904 thousand (US\$1,042 thousand) and lease obligations payable NT\$17,792 thousand (US\$581 thousand).

Other Amendments to IFRSs not listed above are not expected to have a material impact on the entity in the current or future reporting periods and on foreseeable future transactions.

d) Basis of consolidation

The consolidated financial statements include the accounts of ChipMOS Taiwan and all entities controlled by ChipMOS Taiwan. The financial statements of subsidiaries are prepared for the same reporting period as the Company, using consistent accounting policies. The results of subsidiaries are consolidated from the date on which the Group obtains control, and continue to be consolidated until the date that such control ceases.

Profit or loss and each component of other comprehensive income are attributed to the owners of the parent and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. All intra-group transactions, balances, income and expenses are eliminated in full on consolidation.

The Group reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control described in the accounting policy for subsidiaries below.

Changes in the Group's ownership interests in subsidiaries that do not result in the Group losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the Group's interests and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

2. Basis of preparation of financial statements and principal accounting policies (continued)

d) Basis of consolidation (continued)

amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity and attributed to owners of the Company.

When the Group loses control of a subsidiary, the profit or loss on disposal is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any investment retained and (ii) the previous carrying amount of the assets (including goodwill), and liabilities of the subsidiary and any non-controlling interests. The Group's share of components previously recognized in other comprehensive income is reclassified to consolidated statements of comprehensive income or retained profits, as appropriate, on the same basis as would be required if the Group had directly disposed of the related assets or liabilities.

Subsidiaries included in the consolidated financial statements:

<u>Name of investor</u>	<u>Name of investee</u>	<u>Main businesses</u>	<u>Location</u>	<u>Percentage of Ownership (%)</u>	
				<u>December 31, 2017</u>	<u>2018</u>
The Company	ChipMOS U.S.A., Inc. ("ChipMOS USA")	Research, development and marketing of semiconductors, circuits, and electronic related products	San Jose, USA	100	100
The Company	ChipMOS BVI	Holding company	British Virgin Islands	100	100

e) Significant judgments and estimates

The preparation of consolidated financial statements requires management to make judgments, estimates and assumptions that affect the recorded amounts of assets, liabilities, revenue and expenses of the Group. The Group continually evaluates these estimates, including those related to share-based payments, impairment of receivables, impairment of non-financial assets, depreciation of property, plant and equipment, defined benefit plans, deferred tax assets and deferred tax liabilities. The Group bases its estimates on historical experience and other assumptions, which it believes to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions and conditions.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that periods, or in the period of the revision and future periods if the revision affects both current and future periods.

Management has considered the development, selection and disclosure of the Group's critical accounting policies and estimates.

Judgments

In the process of applying the Group's accounting policies, management has made the following judgments which have the most significant effect on the amounts recognized in the consolidated financial statements:

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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2. Basis of preparation of financial statements and principal accounting policies (continued)

e) Significant judgments and estimates (continued)

Provisions for deficiency compensation

The Group is primarily providing high-integration and high-precision integrated circuit of the packaging and testing services. In cases of deficiencies in the assembly and testing services provided, the Group has to clarify the reason for deficiencies and attribution of responsibility. The Group follows the guidance of IAS 37 “Provisions, Contingent Liabilities and Contingent Assets” to determine provisions for deficiency compensation. Since the timing and amount of these provisions are based on assumptions and estimates it requires management to make critical judgments.

Estimates and assumptions

Revenue recognition

The Group recognizes revenue from services for assembly, LCDD and Bumping based on the progress towards completion of performance obligation during the service period. The Group estimates total expected input costs based on historical experience and measures the progress towards completion by the actual input costs relative to the total expected input costs.

Refund liabilities

The Group estimates sales refund liabilities for sales allowance based on historical results and other known factors. Provisions for such liabilities are recorded as a deduction to revenues when the sales are recognized. The Group reassesses the reasonableness of estimates of discounts and returns periodically.

Causes and effects of accounting change

By considering the Group’s experience on using similar property, plant and equipment in prior periods as well as by referring to the experience from peer industry, on November 10, 2016, the Board of Directors approved to change the estimated useful lives of certain properties from 11 years to 16 years and certain equipment from 2~6 years to 2~8 years effectively from November 1, 2016, in order to better reflect economic benefits from usage of those properties and equipment. The impact on depreciation expenses of current and future periods were expected as follows:

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
	NT\$000	NT\$000	NT\$000	NT\$000
Decrease in depreciation expenses	<u>(119,737)</u>	<u>(605,259)</u>	<u>(391,669)</u>	<u>(164,863)</u>

f) Property, plant and equipment and depreciation

Property, plant and equipment are stated at cost, less provision for depreciation and impairment losses, if any.

The cost of an item of property, plant and equipment comprises its purchase price and any directly attributable cost of bringing the asset to its working condition and location for its intended use. Expenditure incurred after the item has been put into operation, such as repairs and maintenance and overhaul costs, is normally charged to the consolidated statements of comprehensive income in the year in which it is incurred. In situations where it can be clearly demonstrated that the expenditure has resulted in an increase in future economic benefits expected to be obtained from the use of the item, the expenditure is capitalized as an additional cost of the item. When an item of property, plant and

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

2. Basis of preparation of financial statements and principal accounting policies (continued)

f) Property, plant and equipment and depreciation (continued)

equipment is disposed of or retired, its cost and accumulated depreciation are removed from the financial statements and any gain or loss resulting from the disposal or retirement, being the difference between the net proceeds and the carrying amount of the asset, is included in consolidated statements of comprehensive income.

Depreciation is provided on the straight-line method, based on the estimated useful life of the individual assets, as follows:

Buildings	5 to 51 years
Machinery and equipment	2 to 8 years
Tools	2 to 4 years
Other equipment	2 to 6 years

Where parts of an item of property, plant and equipment have different useful lives, the cost of that item is allocated on a reasonable basis among the parts and each part is depreciated separately. Residual values, useful lives and the depreciation method are reviewed, and adjusted if appropriate, at least at each financial year end.

An item of property, plant and equipment including any significant part initially recognized is derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss on disposal or retirement recognized in the consolidated statements of comprehensive income in the year the asset is derecognized is the difference between the net sales proceeds and the carrying amount of the relevant asset.

g) Impairment of non-financial assets

Where an indication of impairment exists, or when periodical impairment testing for an asset is required (other than inventories, deferred tax assets and financial assets), the recoverable amount of the asset is estimated. An asset's recoverable amount is the higher of the value in use of the asset or cash-generating unit to which it belongs and its fair value less costs to sell, and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets, in which case the recoverable amount is determined for the cash-generating unit to which the asset belongs.

An impairment loss is recognized only if the carrying amount of an asset exceeds its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. An impairment loss is charged to the consolidated statements of comprehensive income in the period in which it arises in those expense categories consistent with the function of the impaired asset.

An assessment is made at the end of each reporting period as to whether there is any indication that previously recognized impairment losses may no longer exist or may have decreased. If such indication exists, the recoverable amount is estimated. A previously recognized impairment loss of an asset is reversed only if there has been a change in the estimates used to determine the recoverable amount of that asset, but not to an amount higher than the carrying amount that would have been determined (net of any depreciation), had no impairment loss been recognized for the asset in prior years. A reversal of such impairment loss is credited to the consolidated statements of comprehensive income in the period in which it arises.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

2. Basis of preparation of financial statements and principal accounting policies (continued)

h) Inventories

Inventories are stated at the lower of cost and net realizable value. Cost is determined on a weighted average cost basis and includes all costs of purchase, costs of conversion, and other costs incurred in bringing the inventories to their present location and condition.

Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

When inventories are consumed, the carrying amount of those inventories is recognized as cost of revenue in the period in which the related revenue is recognized. The amount of any write-down of inventories to net realizable value and all losses of inventories are recognized as cost of revenue in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories is recognized as a reduction in the amount of inventories recognized as cost of revenue in the period in which the reversal occurs.

i) Non-current assets held for sale

Non-current assets are classified as assets held for sale when their carrying amount is to be recovered principally through a sale transaction rather than through continuing use, and a sale is considered highly probable. They are stated at the lower of carrying amount and fair value less costs to sell.

j) Investments and other financial assets

Classification

From 1 January, 2018, the group classifies its financial assets in the following measurement categories:

- (a) those to be measured subsequently at fair value (either through other comprehensive income (“OCI”) or through profit or loss), and
- (b) those to be measured at amortized cost.

The classification depends on the entity’s business model for managing the financial assets and the contractual terms of the cash flows.

For assets measured at fair value, gains and losses will either be recorded in profit or loss or OCI. For investments in equity instruments that are not held for trading, this will depend on whether the group has made an irrevocable election at the time of initial recognition to account for the equity investment at fair value through other comprehensive income (“FVTOCI”).

Recognition and derecognition

Regular way purchases or sales of financial assets are recognized on settlement date, the date on which the group complete the purchase or sell the asset. Financial assets are derecognized when the rights to receive cash flows from the financial assets have expired or have been transferred and the group has transferred substantially all the risks and rewards of ownership.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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2. Basis of preparation of financial statements and principal accounting policies (continued)

j) Investments and other financial assets (continued)

Measurement

At initial recognition, the group measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss ("FVTPL"), transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVTPL are expensed in profit or loss.

Debt instruments

Subsequent measurement of debt instruments depends on the group's business model for managing the asset and the cash flow characteristics of the asset. There are three measurement categories into which the group classifies its debt instruments:

Amortized cost: Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost. Interest income from these financial assets is included in finance income using the effective interest rate method. Any gain or loss arising on derecognition is recognized directly in profit or loss.

FVTPL: Assets that do not meet the criteria for amortized cost or FVTOCI are measured at FVTPL. A gain or loss on a debt investment that is subsequently measured at FVTPL is recognized in profit or loss.

Equity instruments

The group subsequently measures all equity investments at fair value. Where the group's management has elected to present fair value gains and losses on equity investments in OCI, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Dividends from such investments continue to be recognized in profit or loss as other income when the group's right to receive payments is established.

Changes in the fair value of financial assets at FVTPL are recognized in other non-operating income (expenses) in the statement of comprehensive income as applicable. Impairment losses (and reversal of impairment losses) on equity investments measured at FVTOCI are not reported separately from other changes in fair value.

Impairment

For financial assets at amortized cost, at each reporting date, the Group recognizes the impairment provision for 12 months expected credit losses if there has not been a significant increase in credit risk since initial recognition or recognizes the impairment provision for the lifetime expected credit losses if such credit risk has increased since initial recognition after taking into consideration all reasonable and verifiable information that includes forecasts. On the other hand, for accounts receivable or contract assets that do not contain a significant financing component, the Group recognizes the impairment provision for lifetime expected credit losses.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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2. Basis of preparation of financial statements and principal accounting policies (continued)

k) Investments in associates

The Group's investments in associates are accounted for using the equity method. An associate is an entity over which the Group has significant influence and that is neither a subsidiary nor a joint venture. Significant influence is the power to participate in the financial and operating policy decisions of an entity, but is not control or joint control over those policies. Any difference between the acquisition cost and the Group's share of the net fair value of the identifiable assets and liabilities of associates is accounted for as follows:

- (a) Any excess of the acquisition cost over the Group's share of the net fair value of the identifiable assets and liabilities of an associate at the date of acquisition is recognized as goodwill and is included in the carrying amount of the investment. Amortization of goodwill is not permitted.
- (b) Any excess of the Group's share of the net fair value of the identifiable assets and liabilities of an associate over the acquisition cost, after reassessing the fair value, is recognized as a gain in profit or loss on the acquisition date.

Under the equity method, the investments in associates are carried on the statements of financial position at cost plus post acquisition changes in the Group's share of profit or loss and other comprehensive income of associates. The Group's share of changes in associates' profit or loss and other comprehensive income are recognized directly in profit or loss and other comprehensive income, respectively, of the Group. Distributions received from an associate reduce the carrying amount of the investment. Any unrealized gains and losses resulting from transactions between the Group and the associate are eliminated to the extent of the Group's interest in the associate.

Upon an associate's issuance of new shares, if the Group takes up more shares than its original proportionate holding while maintaining its significant influence over that associate, such increase would be accounted for as an acquisition of an additional equity interest in the associate. Upon an associate's issuance of new shares, if the Group does not take up proportionate shares and reduces its shareholding while maintaining its significant influence over that associate, the Group will treat the transaction as deemed disposal and reclassify to profit or loss the proportion of the gain or loss previously recognized in other comprehensive income relating to that reduction in ownership interest where appropriate.

The Group ceases to use the equity method upon loss of significant influence over an associate. Any difference between the carrying amount of the investment in an associate upon loss of significant influence and the fair value of the retained investment plus proceeds from disposal will be recognized in profit or loss.

The Group determines at each reporting date whether there is any objective evidence that the investments in associates are impaired. An impairment loss, being the difference between the recoverable amount of the associate and its carrying value, is recognized in profit or loss in the consolidated statements of comprehensive income and forms part of the carrying amount of the investments.

l) Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, or as derivatives designated as hedging instruments in an effective hedge, as appropriate.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

2. Basis of preparation of financial statements and principal accounting policies (continued)

l) Financial liabilities (continued)

All financial liabilities are recognized initially at fair value and, in the case of loans and borrowings, net of directly attributable transaction costs. The Group's financial liabilities include bank loans, accounts payable and other monetary liabilities.

Subsequent measurement

The subsequent measurement of financial liabilities depends on their classification as follows:

Loans and borrowings

After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortized cost, using the effective interest rate method unless the effect of discounting would be immaterial, in which case they are stated at cost. Gains and losses are recognized in the consolidated statements of comprehensive income when the liabilities are derecognized through the effective interest rate amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the effective interest rate. The effective interest rate amortization is included in finance costs in the consolidated statements of comprehensive income.

Notes and accounts payable

Notes and accounts payable are obligations to pay for raw materials, goods or services that have been acquired in the ordinary course of business from suppliers. They are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method. However, short-term accounts payable without bearing interest are subsequently measured at initial invoice amount as the effect of discounting is immaterial.

m) Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability is discharged or cancelled, or expired. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and a recognition of a new liability, and the difference between the respective carrying amounts is recognized in the consolidated statements of comprehensive income.

n) Dividends

Dividends are recommended by the Board of Directors to the Shareholders' approval pursuant to the Company's Article of Incorporation.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

2. Basis of preparation of financial statements and principal accounting policies (continued)

o) Operating lease charges

Where the Group has the use of assets held under operating leases, payments made under the leases are charged to the consolidated statements of comprehensive income in equal installments over the accounting periods covered by the lease term, except where an alternative basis is more representative of the pattern of benefits to be derived from the leased assets. Lease incentives received are recognized in the consolidated statements of comprehensive income as an integral part of the aggregate net lease payments made. Contingent rentals, if any, are charged to the consolidated statements of comprehensive income in the accounting period in which they are incurred.

p) Treasury stock

Treasury stock is stated at cost and shown as a deduction in equity. When the Company retires treasury stock, the treasury stock account is reduced and the share capital as well as the capital surplus – share premium are reversed on a pro rata basis. When the book value of the treasury stock exceeds the sum of par value and share premium, the difference is charged to respective capital surplus and to retained earnings for any remaining amount.

q) Provisions for deficiency compensation

A provision is recognized when a present obligation (legal or constructive) has arisen as a result of a past event and it is probable that a future outflow of resources will be required to settle the obligation, provided that a reliable estimate can be made of the amount of the obligation.

When the effect of discounting is material, the amount recognized for a provision is the present value at the end of the reporting period of the future expenditures expected to be required to settle the obligation. The increase in the discounted present value amount arising from the passage of time is included in finance costs in the consolidated statements of comprehensive income.

r) Foreign currency translation

The consolidated financial statements are presented in New Taiwan dollars, which is the Company's functional currency. Each entity in the Group determines its own functional currency and items included in the financial statements of each entity are measured using that functional currency. Foreign currency transactions are initially recorded using the functional currency rates ruling at the date of the transactions. Monetary assets and liabilities denominated in foreign currencies are retranslated at the functional currency rates of exchange ruling at the end of the reporting period. All differences are taken to profit or loss. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined. The functional currencies of certain overseas subsidiaries are currencies other than the New Taiwan dollars. As at the end of the reporting period, the assets and liabilities of these entities are translated into the presentation currency of the Company at the exchange rates ruling at the end of the reporting period, and their income and expense items are translated into New Taiwan dollars at the weighted average exchange rates for the year.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

2. Basis of preparation of financial statements and principal accounting policies (continued)

r) Foreign currency translation (continued)

The resulting exchange differences are recorded in other comprehensive income and the cumulative balance is included in foreign currency translation reserve in the consolidated statements of changes in equity. On disposal of a foreign entity, the deferred cumulative amount recognized in foreign currency translation reserve relating to that particular foreign operation is recognized in the consolidated statements of comprehensive income. For the purpose of the consolidated statements of cash flows, the cash flows of overseas subsidiaries are translated into New Taiwan dollars at the exchange rates ruling at the dates of the cash flows. Frequently recurring cash flows of overseas subsidiaries which arise throughout the year are translated into New Taiwan dollars at the weighted average exchange rates for the year.

s) Revenue recognition

The Group is primarily engaged in the customized assembly and testing services of high-integration and high-precision integrated circuits based on customer's specification demand to create or enhance the product. When providing assembly and testing services, the Group considers:

- (a) Customer controls the provided raw materials and the Group receives the instruction from the customer on providing assembly and testing services and subsequent treatments.
- (b) The Group provides assembly and testing services to create or enhance an asset which solely provided and controlled by the customer. The Group has no right to transfer the asset for another use.

As the asset ownership belongs to the customer, who bears the significant risk and rewards and rights on the use of the asset, the Group recognizes assembly and testing service revenue over time based on the progress towards completion during the service period.

The progress towards completion on assembly services, services for Liquid Crystal Display and other Flat-Panel Display Driver Semiconductors ("LCDD") and Bumping are measured by the actual input costs relative to estimate total expected input costs. The progress towards completion on testing services is measured by the actual incurred testing volume comparing to planned total testing volume. The Group believes that aforementioned methods are the most appropriate manner to measure the satisfaction of performance obligation to customers because the input costs incurred to assembly and testing volume complete in testing services are based on customer's specification and not linear over the duration of these services. Customer payment on assembly and testing services is based on predetermined payment schedule. A contract asset is recognized when the Group provides services in excess of customer's payment. A contract liability is recognized upon receipt of prepayment from a customer for its performance obligation to transfer services in the future.

Interest income

Interest income is recognized on an accrual basis using the effective interest method by applying the rate that discounts the estimated future cash receipts through the expected life of the financial instrument to the net carrying amount of the financial asset.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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2. Basis of preparation of financial statements and principal accounting policies (continued)

t) Research and development costs

Research and development costs that do not meet the criteria of internally generated intangible assets of IAS 38 “Intangible Assets” are expensed in the period in which it is incurred.

u) Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale. All other borrowing costs are charged to the consolidated statements of comprehensive income in the period in which they are incurred.

v) Pension and other post-employment benefits

The Group operates defined contribution and defined benefit plans in the ROC. For defined contribution retirement benefit plans, payments to the benefit plan are recognized as an expense when the employees have rendered service entitling them to the contribution. For defined benefit retirement plans, the cost of providing benefit is recognized based on actuarial calculations.

For defined benefit retirement benefit plans, the cost of providing benefits is determined using the Projected Unit Credit Method, with actuarial valuations being carried out at the year end. Remeasurements are recognized in other comprehensive income in the period which they incur. Past service costs are recognized in the consolidated statements of comprehensive income on the earlier of the date of the plan amendment or curtailment, and the date that the Group recognizes restructuring-related costs. Net interest is calculated by applying the discount rate to the net defined benefit liability or asset. The Group recognizes i) service costs comprising current service costs, past service costs, gains and losses on curtailments and non-routine settlements, and ii) net interest expense or income, under cost of revenue, research and development expenses, sales and marketing expenses and general and administrative expenses in the consolidated statements of comprehensive income.

Employee entitlements to annual leave are recognized when they accrue to employees. An accrual is made for the estimated liability for annual leave as a result of services rendered by employees up to the end of the reporting period.

w) Share-based payments

Restricted shares

Restricted shares issued to employees are measured at the fair value of the equity instruments granted at the grant date, and are recognized as compensation cost over the vesting period.

For restricted shares where those shares do not restrict distribution of dividends to employees and employees are not required to return the dividends received if they resign during the vesting period, the Group recognizes the fair value of the dividends received by the employees who are expected to resign during the vesting period as compensation cost at the date of dividends declared.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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2. Basis of preparation of financial statements and principal accounting policies (continued)

w) Share-based payments (continued)

For restricted shares where employees do not need to pay to acquire those shares, if the employees who resign during the vesting period, the Group will recover and retire those shares at no cost.

x) Income tax

Income tax represents the sum of current and deferred tax. Income tax relating to items recognized outside profit or loss is recognized outside profit or loss, either in other comprehensive income or directly in equity.

Current tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period, taking into consideration interpretations and practices prevailing in the countries in which the Group operates.

Deferred tax is provided, using the liability method, on all temporary differences at the end of the reporting period between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

- when the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and
- in respect of taxable temporary differences associated with investments in subsidiaries, associates and joint ventures, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences, the carryforward of unused tax credits and any unused tax losses. Deferred tax assets are recognized to the extent that it is probable that taxable profits will be available against which deductible temporary differences, the carryforward of unused tax credits and unused tax losses can be utilized, except:

- when the deferred tax asset relating to the deductible temporary differences arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and
- in respect of deductible temporary differences associated with investments in subsidiaries, associates and joint ventures, deferred tax assets are only recognized to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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2. Basis of preparation of financial statements and principal accounting policies (continued)

x) Income tax (continued)

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognized deferred tax assets are reassessed at the end of each reporting period and are recognized to the extent that it has become probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be recovered.

Deferred tax is calculated, without discounting, at the tax rates that are expected to apply in the period when the asset is realized or the liability is settled, based on the tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Current income tax assets and liabilities are offset and the net amount reported in the statements of financial position when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the asset and settle the liability simultaneously.

If a change in tax rate is enacted or substantively enacted, the Group recognizes the effect of the change immediately in the period in which the change occurs. The effect of the change on items recognized outside profit or loss is recognized in other comprehensive income or equity while the effect of the change on items recognized in profit or loss is recognized in profit or loss.

y) Cash and cash equivalents

Cash and cash equivalents comprise cash on hand and demand deposits, and short-term highly liquid investments which are readily convertible into known amounts of cash, are subject to an insignificant risk of changes in value, and have a short maturity of generally within 3 months when acquired.

z) Related parties

(a) A person, or a close member of that person's family, is related to the Group if that person:

- (i) has control or joint control over the Group;
- (ii) has significant influence over the Group; or
- (iii) is a member of key management personnel of the Group or the Group's parent.

or

(b) An entity is related to the Group if any of the following conditions applies:

- (i) The entity and the Group are members of the same group.
- (ii) One entity is an associate or joint venture of the other entity (or an associate or joint venture of a member of a group of which the other entity is a member).
- (iii) The entity and the Group are joint ventures of the same third party.
- (iv) One entity is a joint venture of a third entity and the other entity is an associate of the third entity.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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2. Basis of preparation of financial statements and principal accounting policies (continued)

z) Related parties (continued)

- (v) The entity is a post-employment benefit plan for the benefit of employees of either the Group or an entity related to the Group.
- (vi) The entity is controlled or jointly controlled by a person identified in (a).
- (vii) A person identified in (a)(i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity).

aa) Subsidiaries

A subsidiary is an entity (including a structured entity) controlled by the Company. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee (i.e., existing rights that give the Group the current ability to direct the relevant activities of the investee).

When the Company has, directly or indirectly, less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

- the contractual arrangement with the other vote holders of the investee;
- rights arising from other contractual arrangements; and
- the Group's voting rights and potential voting rights

The Company's share of its subsidiaries' post-acquisition profits or losses is recognized in profit or loss, and its share of post-acquisition movements in other comprehensive income is recognized in other comprehensive income. When the Company's share of losses in a subsidiary equals or exceeds its interest in the subsidiary, the Company continues to recognize its share in the subsidiary's loss proportionately.

Changes in a parent's ownership interest in a subsidiary that do not result in the parent losing control of the subsidiary (transactions with non-controlling interests) are accounted for as equity transactions, i.e. transactions with owners in their capacity as owner. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity.

bb) Fair value measurement

The Group measures its accrued pension cost at fair value at the end of each reporting period. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either in the principal market for the asset or liability, or in the absence of a principal market, in the most advantageous market for the asset or liability. The principal or the most advantageous market must be accessible by the Group. The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

2. Basis of preparation of financial statements and principal accounting policies (continued)

bb) Fair value measurement (continued)

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities that can be accessed at the measurement date. An active market is a market in which trading for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis.

Level 2: Inputs other than quoted prices from Level 1 that are observable information for the asset or liability, either directly or indirectly.

Level 3: Unobservable inputs for the asset or liability. The fair value of the Group's financial instruments without active market is included in Level 3.

For assets and liabilities that are recognized in the financial statements on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by reassessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

cc) Capital reorganization

The Company merged with ChipMOS Bermuda on October 31, 2016 and the transaction was accounted as capital reorganization within the Group. When presenting comparative financial statements, the Company presented it as if ChipMOS Bermuda had always been combined and the financial statements were restated retrospectively. The assets and liabilities acquired from ChipMOS Bermuda was measured by using book value method, and any differences between the consideration given by the Company and the aggregate book value of the assets and liabilities of ChipMOS Bermuda was first accounted for as addition (deduction) in capital surplus arises from share premium, if the share premium is insufficient, the amount will be accounted for as deduction from retained earnings. In addition, on the effective date of the Merger, the Company reclassified its shares originally held by ChipMOS Bermuda as treasury stock and cancelled those shares with deduction in share premium equal to the proportion of retired shares. If the share premium is insufficient, the amount will be accounted for as deduction from retained earnings. Transaction costs attributable to the Merger are accounted for as deduction from equity.

When presenting comparative financial statements, the Company presented it as if ChipMOS Bermuda had always been combined and the financial statements were restated retrospectively. Net income attributable to ChipMOS Bermuda prior to the Merger were presented as "Predecessors' interests".

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

3. Translation into U.S. dollar amounts

The Company maintains its accounts and expresses its consolidated financial statements in New Taiwan dollars. For convenience purposes, U.S. dollar amounts presented in the accompanying consolidated financial statements have been translated from New Taiwan dollars to U.S. dollars at the noon buying rate in the City of New York for cable transfers as certified for customs purposes by the Federal Reserve Bank of New York as of December 31, 2018, which was NT\$30.61 to US\$1.00. These convenience translations should not be construed as representations that the New Taiwan dollar amounts have been, or could in the future be, converted into U.S. dollars at this or any other rate of exchange.

4. Segment Information

The Group engages mainly in the assembly and testing of semiconductors, memory module and investing. In accordance with IFRS 8 “Operating Segments”, the Group’s chief operating decision maker has been identified as the Chairman of the Board of Directors, who reviews these segment results by Testing, Assembly, Testing and Assembly for Liquid Crystal Display and other Flat-Panel Display Driver Semiconductors (“LCDD”) and Bumping when making decisions about allocating resources and assessing the performance of the Group. The information of the segments’ other assets and liabilities are not regularly provided to the Chairman of the Board of Directors for decision making. Financial segment information is as below:

	2016						Total continuing operations NT\$000	Discontinued operations NT\$000
	Testing NT\$000	Assembly NT\$000	LCDD NT\$000	Bumping NT\$000	Others NT\$000	Elimination NT\$000		
Revenue								
External customers	4,587,054	5,880,780	4,920,302	2,999,457	—	—	18,387,593	1,005,166
Inter-segment	—	1,103	—	510	41,670	(43,283)	—	—
Total revenue	4,587,054	5,881,883	4,920,302	2,999,967	41,670	(43,283)	18,387,593	1,005,166
Operating profit (loss)	1,346,874	143,220	963,698	(341,356)	(82,331)	(31,530)	1,998,575	(146,263)
Depreciation expenses	(664,026)	(635,481)	(1,167,908)	(622,412)	(565)	488	(3,089,904)	(141,375)
Interest income	—	—	—	—	51,756	(13,202)	38,554	3,753
Interest expense	—	—	—	—	(144,545)	—	(144,545)	(606)
Share of profit (loss) of associates	—	—	—	—	(128,866)	157,790	28,924	—
Purchase of property, plant and equipment	771,500	554,162	910,457	887,144	49	—	3,123,312	1,567,683

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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4. Segment Information (continued)

	2017							Total continuing operations NT\$000	Discontinued operations NT\$000
	Testing NT\$000	Assembly NT\$000	LCDD NT\$000	Bumping NT\$000	Others NT\$000	Elimination NT\$000			
Revenue									
External customers	4,838,246	5,259,281	4,789,869	3,053,459	—	—	17,940,855	227,095	
Inter-segment	—	—	247	—	35,808	(36,055)	—	—	
Total revenue	4,838,246	5,259,281	4,790,116	3,053,459	35,808	(36,055)	17,940,855	227,095	
Operating profit (loss)	1,448,939	(55,198)	1,285,495	(336,123)	(100,545)	(2,687)	2,239,881	(25,394)	
Depreciation expenses	(673,393)	(597,500)	(1,048,587)	(579,605)	(503)	310	(2,899,278)	—	
Interest income	—	—	—	—	53,123	—	53,123	464	
Interest expense	—	—	—	—	(190,425)	—	(190,425)	(2,414)	
Share of profit (loss) of associates	—	—	—	—	1,347,851	(1,527,342)	(179,491)	—	
Purchase of property, plant and equipment	836,894	655,879	2,615,153	594,765	—	—	4,702,691	—	
	2018							Total continuing operations NT\$000	Total continuing operations US\$000
	Testing NT\$000	Assembly NT\$000	LCDD NT\$000	Bumping NT\$000	Others NT\$000	Elimination NT\$000			
Revenue									
External customers	4,790,097	4,679,676	5,694,720	3,315,534	—	—	18,480,027	603,725	
Inter-segment	—	—	—	—	35,738	(35,738)	—	—	
Total revenue	4,790,097	4,679,676	5,694,720	3,315,534	35,738	(35,738)	18,480,027	603,725	
Timing of revenue recognition									
At a point in time	—	—	—	—	35,738	(35,738)	—	—	
Over time	4,790,097	4,679,676	5,694,720	3,315,534	—	—	18,480,027	603,725	
	4,790,097	4,679,676	5,694,720	3,315,534	35,738	(35,738)	18,480,027	603,725	
Operating profit (loss)	1,306,742	(207,700)	1,226,755	(202,497)	(23,433)	(146)	2,099,721	68,596	
Depreciation expenses	(769,660)	(578,205)	(1,400,784)	(627,412)	(518)	—	(3,376,579)	(110,310)	
Interest income	—	—	—	—	49,971	—	49,971	1,633	
Interest expense	—	—	—	—	(152,416)	—	(152,416)	(4,979)	
Share of profit (loss) of associates	—	—	—	—	(668,377)	368,276	(300,101)	(9,804)	
Purchase of property, plant and equipment	1,563,919	321,976	2,732,141	327,251	283	—	4,945,570	161,567	

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

4. Segment Information (continued)

Geographic information of revenue:

Area	2016	2017	2018	2018
	NT\$000	NT\$000	NT\$000	US\$000
ROC	12,728,014	13,152,419	14,751,766	481,926
Japan	1,855,674	2,257,296	1,825,479	59,637
Singapore	3,087,835	1,798,585	1,143,661	37,362
Others	716,070	732,555	759,121	24,800
	18,387,593	17,940,855	18,480,027	603,725

Net revenue from customers representing at least 10% of the total revenue:

Customers	2016		2017		2018		2018
	Amount	%	Amount	%	Amount	%	Amount
	NT\$000		NT\$000		NT\$000		US\$000
Customer A	3,370,285	18	3,434,873	19	3,794,991	21	123,979
Customer K	2,633,431	14	2,742,882	15	2,637,053	14	86,150
Customer C	1,870,675	10	1,530,209	9	1,957,467	11	63,949
Customer I	3,085,190	17	1,798,111	10	1,101,956	6	36,000

The revenue generated from the above customers is mainly from the segments of Assembly and LCDD.

Contract assets and liabilities:

The Group has recognized the following contract assets and liabilities in relation to revenue from contracts with customers:

	December 31, 2018	
	NT\$000	US\$000
Contract assets	299,835	9,795
Contract liabilities (Advance payments)	1,432	47

The Group uses operating profit (loss) as the measurement for segment profit (loss) and the basis of performance assessment. There was no material inconsistency between the accounting policies of the operating segment and the accounting policies described in Note 2.

Contract assets have increased as the Group has completed more services in excess of customer's payment. The Group also recognized a loss allowance for contract assets following the adoption of IFRS 9, see Note 35 b) for further information.

Revenue recognized in the current reporting period amounted to NT\$1,013 thousand was related to carried-forward contract liabilities but was not related to performance obligations that were satisfied in prior year.

All of the service contracts are for periods of one year or less. As permitted under IFRS 15, the transaction price allocated to these unsatisfied contracts is not disclosed. As of December 31, 2018, the Group has not recognized an asset in relation to costs to fulfil a service contract.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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5. Operating costs and expenses

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2018</u>
	NT\$000	NT\$000	NT\$000	US\$000
Change of finished goods and work in process	(19,498)	31,977	—	—
Consumption of raw materials and supplies	3,346,540	3,036,350	3,079,909	100,617
Employee benefit expenses	5,317,125	5,895,778	5,606,833	183,170
Depreciation and amortization	3,089,904	2,899,278	3,376,579	110,310
Other expenses	4,745,253	4,530,425	4,464,499	145,851
Total operating costs and expenses	<u>16,479,324</u>	<u>16,393,808</u>	<u>16,527,820</u>	<u>539,948</u>
Employee benefit expenses				
Salaries	4,109,393	4,847,433	4,628,039	151,194
Directors remuneration	16,810	27,276	18,456	603
Labor and health insurance	351,232	390,788	406,111	13,267
Pension	183,293	198,502	201,567	6,585
Share-based payments	356,463	123,021	41,043	1,341
Other personnel expenses	299,934	308,758	311,617	10,180
	<u>5,317,125</u>	<u>5,895,778</u>	<u>5,606,833</u>	<u>183,170</u>

6. Other operating income (expenses), net

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2018</u>
	NT\$000	NT\$000	NT\$000	US\$000
Gain on disposal of property, plant and equipment, net	2,575	132,777	14,274	466
Impairment on property, plant and equipment	(8,198)	(956)	—	—
Gain on disposal of scrapped materials	30,476	27,940	59,380	1,940
Gain on disposal of items purchased on behalf of others	48,812	26,417	31,268	1,021
Royalty income	—	11,998	43,224	1,412
Insurance compensation income	7,033	486,858	147	5
Others	9,608	7,800	(779)	(25)
	<u>90,306</u>	<u>692,834</u>	<u>147,514</u>	<u>4,819</u>

7. Finance costs

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2018</u>
	NT\$000	NT\$000	NT\$000	US\$000
Interest expenses				
Bank loans	157,254	208,486	170,476	5,569
Lease obligations payable	212	708	482	16
Less: Amounts capitalized in qualifying assets	(12,921)	(18,769)	(18,542)	(606)
	<u>144,545</u>	<u>190,425</u>	<u>152,416</u>	<u>4,979</u>
Finance expense	<u>34,571</u>	<u>26,858</u>	<u>37,832</u>	<u>1,236</u>
	<u>179,116</u>	<u>217,283</u>	<u>190,248</u>	<u>6,215</u>

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

8. Other non-operating income (expenses), net

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2018</u>
	NT\$000	NT\$000	NT\$000	US\$000
Interest income				
Bank deposits	38,554	53,123	49,051	1,603
Financial assets at amortized cost	—	—	920	30
Foreign exchange gains (losses), net	(195,326)	(418,970)	93,104	3,041
Gain on valuation of financial assets at fair value through profit or loss	621	637	1,485	49
Gain on disposal of long-term investment in associates	—	16,929	—	—
Rental income	8,203	11,075	7,819	255
Dividend income	—	—	571	19
Reimbursement of ADSs service charge	—	23,707	13,269	433
Others	—	2,808	6,851	224
	<u>(147,948)</u>	<u>(310,691)</u>	<u>173,070</u>	<u>5,654</u>

9. Income tax expense

Income tax expense arising in other jurisdictions is calculated at the rates prevailing in the relevant jurisdictions, based on existing legislation, interpretations and practices in respect thereof.

The amendment to the Income Tax Act in ROC has been approved and promulgated in February 2018 to raise the profit-seeking enterprise income tax rate from 17% to 20%, decrease the tax rate on unappropriated retained earnings from 10% to 5%, and abandon the imputation tax credit account effective from fiscal year starting January 1, 2018.

The statutory tax rates for the years ended December 31, 2016 and 2017 for ChipMOS Taiwan and Unimos Shanghai were 17% and 25%, respectively. The statutory tax rate for the year ended December 31, 2018 for ChipMOS Taiwan was 20%.

a) The major components of income tax expense for the years ended December 31, 2016, 2017 and 2018 are:

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2018</u>
	NT\$000	NT\$000	NT\$000	US\$000
<i>Current income tax:</i>				
Current income tax on profits for the period	331,144	125,376	326,057	10,652
Income tax (benefit) on unappropriated retained earnings	(174,930)	246,684	28,165	920
Prior year income tax under estimation	4,527	67,885	3,729	122
Total current income tax	<u>160,741</u>	<u>439,945</u>	<u>357,951</u>	<u>11,694</u>
<i>Deferred income tax:</i>				
Relating to origination and reversal of temporary differences	16,379	110,542	101,441	3,314
Impact of change in tax rate	—	—	(2,774)	(90)
Total deferred income tax	<u>16,379</u>	<u>110,542</u>	<u>98,667</u>	<u>3,224</u>
Income tax expense reported in the consolidated statements of comprehensive income	<u>177,120</u>	<u>550,487</u>	<u>456,618</u>	<u>14,918</u>

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

9. Income tax expense (continued)

Deferred tax charged to other comprehensive income:

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2018</u>
	NT\$000	NT\$000	NT\$000	US\$000
Unrealized gain on valuation of financial assets at fair value through other comprehensive income	—	—	17,005	556
Remeasurement of defined benefit obligations	(7,375)	8,642	(11,992)	(392)
Impact of change in tax rate	—	—	(887)	(29)
	<u>(7,375)</u>	<u>8,642</u>	<u>4,126</u>	<u>135</u>

b) Reconciliation of income tax expense and the accounting profit before income tax:

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2018</u>
	NT\$000	NT\$000	NT\$000	US\$000
Tax calculated based on profit before tax and statutory tax rate	214,550	566,649	356,488	11,646
Expenses disallowed (added) by tax regulations	(2,190)	10,185	14,689	480
Temporary difference not recognized as deferred tax assets	1,306	(85,168)	(10,951)	(358)
Tax exempted (income) expenses by tax regulation	12,057	(256,788)	66,353	2,168
Taxable loss not recognized as deferred tax assets	54,012	—	—	—
Effect of different tax rates in countries in which the Group operates	10,451	1,040	919	30
Withholding tax	57,337	—	—	—
Impact of change in tax rate	—	—	(2,774)	(90)
Prior year income tax under estimation	4,527	67,885	3,729	122
Income tax (benefit) on unappropriated retained earnings	(174,930)	246,684	28,165	920
Income tax expense reported in the consolidated statements of comprehensive income	<u>177,120</u>	<u>550,487</u>	<u>456,618</u>	<u>14,918</u>

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

9. Income tax expense (continued)

c) The details of deferred tax assets (liabilities) are as follows:

	<u>January 1,</u> NT\$000	<u>Retroactive</u> <u>adjustment</u> NT\$000	<u>Profit or</u> <u>loss</u> NT\$000	<u>Other</u> <u>comprehensive</u> <u>income (loss)</u> NT\$000	<u>December 31,</u> NT\$000	<u>December 31,</u> US\$000
Year of 2017						
Deferred tax assets						
Unrealized exchange losses	—	—	8,167	—	8,167	
Loss on inventories	26,324	—	(17,192)	—	9,132	
Property, plant and equipment	80,869	—	(25,375)	—	55,494	
Deferred revenue	41,294	—	(1,809)	—	39,485	
Provisions	11,232	—	10,411	—	21,643	
Net defined benefit liability	90,087	—	(2,994)	(8,642)	78,451	
Deferred tax assets	<u>249,806</u>	<u>—</u>	<u>(28,792)</u>	<u>(8,642)</u>	<u>212,372</u>	
Deferred tax liabilities						
Unrealized exchange gains	(14,155)	—	14,155	—	—	
Property, plant and equipment	(78,388)	—	(95,905)	—	(174,293)	
Deferred tax liabilities	<u>(92,543)</u>	<u>—</u>	<u>(81,750)</u>	<u>—</u>	<u>(174,293)</u>	
Year of 2018						
Deferred tax assets						
Unrealized exchange losses	8,167	144	(4,736)	—	3,575	117
Loss on inventories	9,132	(770)	(1,130)	—	7,232	236
Property, plant and equipment	55,494	—	8,689	—	64,183	2,097
Deferred revenue	39,485	—	(5,329)	—	34,156	1,116
Provisions	21,643	—	(9,247)	—	12,396	405
Net defined benefit liability	78,451	—	7,889	14,403	100,743	3,291
Investment tax credit	—	—	4,420	—	4,420	144
Others	—	—	11	—	11	1
Deferred tax assets	<u>212,372</u>	<u>(626)</u>	<u>567</u>	<u>14,403</u>	<u>226,716</u>	<u>7,407</u>
Deferred tax liabilities						
Property, plant and equipment	(174,293)	—	(107,301)	—	(281,594)	(9,200)
Contract assets	—	(8,067)	8,067	—	—	—
Financial assets at fair value through other comprehensive income	—	(8,636)	—	(18,529)	(27,165)	(887)
Deferred tax liabilities	<u>(174,293)</u>	<u>(16,703)</u>	<u>(99,234)</u>	<u>(18,529)</u>	<u>(308,759)</u>	<u>(10,087)</u>

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

9. Income tax expense (continued)

- d) The Company has not recognized deductible and taxable temporary differences associated with investments as deferred tax assets and liabilities. As of December 31, 2017, the amounts of deductible and taxable temporary differences not recognized as deferred tax assets and liabilities were NT\$28,584 thousand and NT\$920,943 thousand, respectively. As of December 31, 2018, the amounts of deductible and taxable temporary differences not recognized as deferred tax assets and liabilities were nil and NT\$495,154 thousand (US\$16,176 thousand), respectively.
- e) The Company's income tax returns through 2016 have been assessed and approved by the Tax Authority.

10. Earnings per share ("EPS")

Basic EPS amounts are calculated by dividing the profit for the year attributable to equity holders of the Company by the weighted average number of ordinary shares outstanding during the year.

Diluted EPS amounts are calculated by dividing the profit attributable to equity holders of the Company by the weighted average number of ordinary shares outstanding during the year plus the weighted average number of ordinary shares that would be issued on conversion of all the dilutive potential ordinary shares into ordinary shares.

The following reflects the income and share data used in the basic and diluted EPS computations:

	2016		Earnings per share
	Amount after income tax	Weighted average number of ordinary shares outstanding*	
	NT\$000	In thousands	NT\$
Basic earnings per share			
Profit (loss) attributable to:			
Equity holders of the Company			
- Continuing operations	1,829,327		2.13
- Discontinued operations	(122,105)		(0.14)
Equity holders of the Company	1,707,222		1.99
Predecessors' interests	(306,012)		(0.35)
	<u>1,401,210</u>	<u>859,644</u>	<u>1.64</u>
Diluted earnings per share			
Employees' compensations		3,035	
Restricted shares		4,122	
Profit (loss) attributable to:			
Equity holders of the Company			
- Continuing operations	1,829,327		2.11
- Discontinued operations	(122,105)		(0.14)
Equity holders of the Company	1,707,222		1.97
Predecessors' interests	(306,012)		(0.35)
	<u>1,401,210</u>	<u>866,801</u>	<u>1.62</u>

* The weighted average number of shares takes into account the weighted average effect of changes in treasury stock transaction during the year.

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Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

10. Earnings per share (“EPS”) (continued)

	2017		
	Amount after income tax	Weighted average number of ordinary shares outstanding	Earnings per share
	NT\$000	In thousands	NT\$
Basic earnings per share			
Profit attributable to:			
Equity holders of the Company			
- Continuing operations	981,929		1.16
- Discontinued operations	1,814,953		2.14
	<u>2,796,882</u>	<u>846,686</u>	<u>3.30</u>
Diluted earnings per share			
Employees' compensations		14,034	
Restricted shares		5,075	
Profit attributable to:			
Equity holders of the Company			
- Continuing operations	981,929		1.13
- Discontinued operations	1,814,953		2.10
	<u>2,796,882</u>	<u>865,795</u>	<u>3.23</u>

	2018			
	Amount after income tax	Weighted average number of ordinary shares outstanding	Earnings per share	Earnings per share
	NT\$000	In thousands	NT\$	US\$
Basic earnings per share				
Profit attributable to the equity holders of the Company				
	<u>1,325,824</u>	<u>802,725</u>	<u>1.65</u>	<u>0.05</u>
Diluted earnings per share				
Employees' compensations		7,626		
Restricted shares		3,356		
Profit attributable to the equity holders of the Company				
	<u>1,325,824</u>	<u>813,707</u>	<u>1.63</u>	<u>0.05</u>

11. Dividend

A distribution of NT\$1.00 per share (including cash distribution from capital surplus of NT\$0.70 per share) was approved by the shareholders of the Company on May 26, 2017. The distribution of NT\$856,754 thousand was fully paid on July 12, 2017 to all ordinary shareholders of record at the close of business on June 19, 2017.

A dividend of NT\$0.30 per share was approved by the shareholders of the Company on June 26, 2018. The dividend of NT\$256,806 thousand (US\$8,390 thousand) was fully paid on October 31, 2018 to all ordinary shareholders of record at the close of business on October 25, 2018.

12. Non-current financial assets at fair value through profit or loss

	December 31, 2018	December 31, 2018
	NT\$000	US\$000
Financial assets mandatorily measured at fair value through profit or loss		
Foreign partnership interests	10,940	358
Valuation adjustment	531	17
	<u>11,471</u>	<u>375</u>

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
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12. Non-current financial assets at fair value through profit or loss (continued)

Amounts recognized in profit or loss in relation to the financial assets at fair value through profit or loss are listed below:

	<u>2018</u> <u>NT\$000</u>	<u>2018</u> <u>US\$000</u>
Financial assets mandatorily measured at fair value through profit or loss		
Foreign partnership interests	38	1
Beneficiary certificates*	1,396	46
Derivative instruments	51	2
	<u>1,485</u>	<u>49</u>

* Beneficiary certificates represent money market funds the Company held during the reporting period. As of December 31, 2018, there were no beneficiary certificates classified as FVTPL.

No financial assets at fair value through profit or loss were pledged to others.

Information about the fair value measurement is provided in Note 35 c).

Information about the financial assets at fair value through profit or loss as of December 31, 2017 is provided in Note 41.

13. Non-current financial assets at fair value through other comprehensive income

	<u>December 31,</u> <u>2018</u> <u>NT\$000</u>	<u>December 31,</u> <u>2018</u> <u>US\$000</u>
Designation of equity instruments		
Foreign unlisted stocks	38,534	1,259
Valuation adjustment	135,823	4,437
	<u>174,357</u>	<u>5,696</u>

Based on the Group's business model, the foreign unlisted stocks held for strategic investments and not for the purpose of trading were elected to classify as "Financial assets at fair value through other comprehensive income". As of December 31, 2018, the fair value of aforementioned investments was NT\$174,357 thousand (US\$5,696 thousand). For the year ended December 31, 2018, dividend income recognized related to investments held at the end of the reporting period was NT\$571 thousand (US\$19 thousand).

Amounts recognized in other comprehensive income in relation to the financial assets at fair value through other comprehensive income are listed below:

	<u>2018</u> <u>NT\$000</u>	<u>2018</u> <u>US\$000</u>
Financial assets at fair value through other comprehensive income		
Foreign unlisted stocks	<u>85,022</u>	<u>2,778</u>

No financial assets at fair value through other comprehensive income were pledged to others.

Information about the fair value measurement is provided in Note 35 c).

Information about the financial assets at fair value through other comprehensive income as of December 31, 2017 is provided in Note 41.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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14. Investment in associates

Details of investment in associates are as follows:

Investee company	Country of incorporation and business	Measurement method	December 31, 2017		December 31, 2018		
			Carrying amount	Ownership	Carrying amount		Ownership
			NT\$000	%	NT\$000	US\$000	%
JMC ELECTRONICS CO., LTD. (“JMC”)	Kaohsiung, Taiwan	Equity method	373,276	19.10	406,792	13,290	19.10
Unimos Shanghai	Shanghai, People’s Republic of China	Equity method	3,060,056	45.02	3,456,949	112,935	45.02

On November 30, 2016, the Company’s Board of Directors adopted a resolution to authorize its subsidiary, ChipMOS BVI, to dispose 54.98% of Unimos Shanghai’s equity. The equity transfer was completed in March 2017, and subsequently, due to the loss of control but retention of significant influence, Unimos Shanghai was excluded from the consolidated financial statements and was accounted for as an “Investment in associate”. Information is provided in Note 20.

In January 2017, the Company did not participate in the capital increase of JMC, which reduced the Company’s shareholding from 21.22% to 19.10%. Given that the Company still retains significant influence by holding two seats in JMC’s Board of Directors, JMC was still recognized as “Investment in associates”. As a result of the change in shareholding, the Company recognized disposal gain from long-term investment amounted to NT\$16,929 thousand for the year ended December 31, 2017.

In June 2017 and January 2018, ChipMOS BVI participated in Unimos Shanghai’s increase of paid-in capital based on its shareholding amounted to NT\$1,373,486 thousand and NT\$794,694 thousand (US\$25,962 thousand), respectively.

For the years ended December 31, 2017 and 2018, the Company recognized its share of loss of investments in associates amounted to NT\$179,491 thousand and NT\$300,101 thousand (US\$9,804 thousand), respectively.

The tables below provide summarized financial information for the investment in associates that are material to the Group.

Statements of financial position

	JMC		
	December 31, 2017	December 31, 2018	December 31, 2018
	NT\$000	NT\$000	US\$000
Current assets	843,636	1,106,789	36,158
Non-current assets	1,161,620	1,699,498	55,521
Current liabilities	(294,302)	(817,697)	(26,714)
Non-current liabilities	(1,756)	(103,922)	(3,395)
Total net assets	1,709,198	1,884,668	61,570
Group’s share	326,456	359,972	11,760
Goodwill	46,820	46,820	1,530
Carrying amount	373,276	406,792	13,290

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14. Investment in associates (continued)

Statements of financial position

	Unimos Shanghai		
	December 31, 2017	December 31, 2018	December 31, 2018
	NT\$000	NT\$000	US\$000
Current assets	3,380,641	3,946,082	128,915
Non-current assets	2,766,839	3,254,687	106,328
Current liabilities	(460,054)	(554,160)	(18,104)
Non-current liabilities	(489,097)	(442,306)	(14,450)
Total net assets	5,198,329	6,204,303	202,689
Group's share	2,340,506	2,793,438	91,259
Depreciable assets	703,536	644,718	21,062
Goodwill	22,118	22,118	723
Inter-company transactions and amortization	(6,104)	(3,325)	(109)
Carrying amount	3,060,056	3,456,949	112,935

Statements of comprehensive income

	JMC			
	Year ended December 31,			
	2016	2017	2018	2018
	NT\$000	NT\$000	NT\$000	US\$000
Revenue	1,667,761	1,322,928	1,931,008	63,084
Profit for the year from continuing operations	136,303	4,414	219,544	7,172
Other comprehensive income (loss), net of income tax	(627)	2,903	(14,074)	(460)
Total comprehensive income	135,676	7,317	205,470	6,712
Dividend received from the associate	5,730	14,325	5,730	187

	Unimos Shanghai		
	Year ended December 31,		
	2017	2018	2018
	NT\$000	NT\$000	US\$000
Revenue	1,141,415	1,334,196	43,587
Loss for the year from continuing operations	(348,472)	(629,303)	(20,559)
Other comprehensive income, net of income tax	—	—	—
Total comprehensive loss	(348,472)	(629,303)	(20,559)
Dividend received from the associate	—	—	—

According to IFRS 5 "Non-current Assets Held for Sale and Discontinued Operations", total comprehensive income of Unimos Shanghai for the three months ended March 31, 2017 was included in the Group's consolidated statement of comprehensive income with the adjustments of ceasing to recognize depreciation and amortization expenses and the elimination of inter-company transactions. Information about discontinued operations is provided in Note 20.

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December 31, 2016, 2017 and 2018

15. *Financial assets at amortized cost*

	December 31, 2018 <u>NT\$000</u>	December 31, 2018 <u>US\$000</u>
<u>Current</u>		
Time deposits	<u>169,168</u>	<u>5,526</u>
<u>Non-current</u>		
Time deposits	30,715	1,003
Restricted bank deposits	<u>68,388</u>	<u>2,234</u>
	<u>99,103</u>	<u>3,237</u>

Amounts recognized in profit or loss in relation to financial assets at amortized cost are listed below:

	<u>2018</u> <u>NT\$000</u>	<u>2018</u> <u>US\$000</u>
Interest income	<u>920</u>	<u>30</u>

As of December 31, 2018, without taking into account any collateral held or other credit enhancements, the maximum exposure to credit risk in respect of the amount that best represents the financial assets at amortized cost held by the Group was NT\$268,271 thousand (US\$8,763 thousand).

Information about the financial assets at amortized cost that were pledged to others as collateral is provided in Note 34.

Information relating to credit risk of financial assets at amortized cost is provided in Note 35 b).

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16. Property, plant and equipment, net

	Land NT\$000	Buildings NT\$000	Machinery and equipment NT\$000	Tools NT\$000	Other equipment NT\$000	Construction in progress and equipment to be inspected NT\$000	Total NT\$000	Total US\$000
January 1, 2017								
Cost	452,738	11,183,278	47,002,228	3,999,894	3,353,413	1,627,816	67,619,367	
Accumulated depreciation and impairment	—	(6,395,332)	(39,430,608)	(3,475,451)	(2,786,790)	—	(52,088,181)	
	<u>452,738</u>	<u>4,787,946</u>	<u>7,571,620</u>	<u>524,443</u>	<u>566,623</u>	<u>1,627,816</u>	<u>15,531,186</u>	
Less: Property, plant and equipment classified as held for sale	—	(710,191)	(433,688)	(90,460)	(168,314)	(631,315)	(2,033,968)	
	<u>452,738</u>	<u>4,077,755</u>	<u>7,137,932</u>	<u>433,983</u>	<u>398,309</u>	<u>996,501</u>	<u>13,497,218</u>	
January 1, 2017	452,738	4,077,755	7,137,932	433,983	398,309	996,501	13,497,218	
Additions	—	211,098	2,007,767	571,601	195,957	1,716,268	4,702,691	
Disposals	—	—	(30,066)	(2,302)	(1,865)	—	(34,233)	
Reclassifications	—	141,400	1,535,619	44,882	22,149	(1,744,050)	—	
Depreciation expenses	—	(511,167)	(1,837,482)	(357,695)	(192,934)	—	(2,899,278)	
Impairment losses	—	—	—	—	(956)	—	(956)	
Exchange adjustments	—	—	(43)	—	(88)	—	(131)	
December 31, 2017	<u>452,738</u>	<u>3,919,086</u>	<u>8,813,727</u>	<u>690,469</u>	<u>420,572</u>	<u>968,719</u>	<u>15,265,311</u>	
December 31, 2017								
Cost	452,738	9,809,970	45,778,207	4,004,703	2,624,083	968,719	63,638,420	
Accumulated depreciation and impairment	—	(5,890,884)	(36,964,480)	(3,314,234)	(2,203,511)	—	(48,373,109)	
	<u>452,738</u>	<u>3,919,086</u>	<u>8,813,727</u>	<u>690,469</u>	<u>420,572</u>	<u>968,719</u>	<u>15,265,311</u>	
January 1, 2018								
Cost	452,738	9,809,970	45,778,207	4,004,703	2,624,083	968,719	63,638,420	2,079,008
Accumulated depreciation and impairment	—	(5,890,884)	(36,964,480)	(3,314,234)	(2,203,511)	—	(48,373,109)	(1,580,304)
	<u>452,738</u>	<u>3,919,086</u>	<u>8,813,727</u>	<u>690,469</u>	<u>420,572</u>	<u>968,719</u>	<u>15,265,311</u>	<u>498,704</u>
January 1, 2018	452,738	3,919,086	8,813,727	690,469	420,572	968,719	15,265,311	498,704
Additions	—	247,186	2,445,313	591,229	172,652	1,489,190	4,945,570	161,567
Disposals	—	—	(904)	(11,745)	(2,067)	—	(14,716)	(481)
Reclassifications	—	199,724	1,154,663	7,604	26,026	(1,388,017)	—	—
Depreciation expenses	—	(457,265)	(2,180,718)	(535,378)	(203,218)	—	(3,376,579)	(110,310)
Exchange adjustments	—	—	12	—	23	—	35	1
December 31, 2018	<u>452,738</u>	<u>3,908,731</u>	<u>10,232,093</u>	<u>742,179</u>	<u>413,988</u>	<u>1,069,892</u>	<u>16,819,621</u>	<u>549,481</u>
December 31, 2018								
Cost	452,738	10,254,531	48,274,171	4,402,711	2,610,893	1,069,892	67,064,936	2,190,948
Accumulated depreciation and impairment	—	(6,345,800)	(38,042,078)	(3,660,532)	(2,196,905)	—	(50,245,315)	(1,641,467)
	<u>452,738</u>	<u>3,908,731</u>	<u>10,232,093</u>	<u>742,179</u>	<u>413,988</u>	<u>1,069,892</u>	<u>16,819,621</u>	<u>549,481</u>

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16. Property, plant and equipment, net (continued)

As of December 31, 2017 and 2018, certain of the above property, plant and equipment were pledged as collateral for long-term bank loans (Notes 34). Amount of borrowing costs capitalized as part of property, plant and equipment and the range of the interest rates for such capitalization are as follows:

	<u>2017</u>	<u>2018</u>	<u>2018</u>
	NT\$000	NT\$000	US\$000
Capitalization interest	18,769	18,542	606
Capitalization interest rate applied	1.7624%	1.7582%	1.7582%

17. Inventories

	<u>December 31, 2017</u>		
	<u>Cost</u>	<u>Allowance for impairment losses</u>	<u>Carrying amount</u>
	NT\$000	NT\$000	NT\$000
Raw materials	1,769,917	(49,183)	1,720,734
Work in process	180,252	(4,163)	176,089
Finished goods	32,784	(368)	32,416
	<u>1,982,953</u>	<u>(53,714)</u>	<u>1,929,239</u>

	<u>December 31, 2018</u>			
	<u>Cost</u>	<u>Allowance for impairment losses</u>	<u>Carrying amount</u>	
	NT\$000	NT\$000	NT\$000	US\$000
Raw materials	<u>1,814,992</u>	<u>(36,157)</u>	<u>1,778,835</u>	<u>58,113</u>

The cost of inventories recognized as an expense for the year:

	<u>2017</u>	<u>2018</u>	<u>2018</u>
	NT\$000	NT\$000	US\$000
Cost of revenue	14,766,555	15,057,605	491,918
Loss on abandonment	38,301	5,497	179
Reversal of inventory valuation and obsolescence loss	(101,127)	(13,070)	(427)
	<u>14,703,729</u>	<u>15,050,032</u>	<u>491,670</u>

Raw materials are utilized throughout the course of provision of semiconductor bumping, assembly and testing services. Items used for manufacturing and product sales are insignificant.

Reversal of inventory valuation and obsolescence loss was recognized due to the change in net realizable market value.

As of December 31, 2017 and 2018, no inventories were pledged.

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18. Accounts and notes and other receivables

	<u>December 31,</u> <u>2017</u>	<u>December 31,</u> <u>2018</u>	<u>December 31,</u> <u>2018</u>
	<u>NT\$000</u>	<u>NT\$000</u>	<u>US\$000</u>
Accounts receivable	4,013,705	4,747,834	155,108
Notes receivable	2,029	1,595	52
Less: Loss allowance	—	(2,141)	(70)
	<u>4,015,734</u>	<u>4,747,288</u>	<u>155,090</u>
Other receivables	56,716	63,049	2,060
Less: Loss allowance	—	(12)	(1)
	<u>56,716</u>	<u>63,037</u>	<u>2,059</u>
	<u>4,072,450</u>	<u>4,810,325</u>	<u>157,149</u>

As of December 31, 2017 and 2018, no accounts and notes and other receivables were pledged.

The Group's credit term granted to customers is 30~90 days. Receivables do not bear interest. The loss allowance is determined based on the credit quality of customers. Information relating to credit risk is provided in Note 35 b).

The aging analysis of accounts receivable based on past due date is as follows:

	<u>December 31,</u> <u>2017</u>	<u>December 31,</u> <u>2018</u>	<u>December 31,</u> <u>2018</u>
	<u>NT\$000</u>	<u>NT\$000</u>	<u>US\$000</u>
Current	3,997,833	4,595,300	150,124
Within 1 month	10,482	18,807	615
1 – 2 months	477	131,787	4,305
2 – 3 months	426	1,436	47
3 – 4 months	1,431	180	6
Over 4 months	3,056	324	11
	<u>4,013,705</u>	<u>4,747,834</u>	<u>155,108</u>

Without taking into account of any collateral held or other credit enhancements, the amount that best reflects the Group' maximum exposure to credit risk in respect of the accounts receivable is the carrying amount at the end of each reporting period.

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19. Cash and cash equivalents

	<u>December 31,</u> <u>2017</u>	<u>December 31,</u> <u>2018</u>	<u>December 31,</u> <u>2018</u>
	<u>NT\$000</u>	<u>NT\$000</u>	<u>US\$000</u>
Short-term deposits	3,883,614	3,245,750	106,036
Cash	470	470	15
Cash at banks	<u>4,151,630</u>	<u>1,396,302</u>	<u>45,616</u>
	<u>8,035,714</u>	<u>4,642,522</u>	<u>151,667</u>

Cash at banks earns interest at floating rates based on daily bank deposit rates. Short-term deposits are made for varying periods of between 31 days and 3 months, depending on the immediate cash requirements of the Group, and earn interest at the respective short-term deposit rates.

As of December 31, 2017 and 2018, no cash and cash equivalents were pledged.

20. Non-current assets held for sale and discontinued operations

- a) The assets and liabilities related to Unimos Shanghai have been classified as non-current assets held for sale and liabilities directly related to non-current assets held for sale and presented as discontinued operations for meeting the definition of discontinued operations following the resolution of the Company's Board of Directors on November 30, 2016 to sell 54.98% of Unimos Shanghai's equity interest. The transaction was completed in March 2017, and subsequently, due to the loss of control but retention of significant influence, Unimos Shanghai was excluded from the consolidated financial statements and recorded as "Investments in associates". As of December 31, 2017 and 2018, there were no related assets and liabilities of disposal group classified as held for sale. Please refer to Note 14 for more details.

In March 2017, the Company received NT\$2,230,544 thousand in cash and recognized total gain on disposal of discontinued operations amounted to NT\$1,843,234 thousand. Based on the fair value received and the book value of its investment, gain on disposal of 54.98% equity interest is equal to NT\$999,630 thousand and gain on fair value remeasurement of 45.02% retained investment is equal to NT\$843,604 thousand.

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20. Non-current assets held for sale and discontinued operations (continued)

b) The cash flow information of the discontinued operations is as follows:

	<u>2016</u>	<u>2017</u>
	NT\$000	NT\$000
Net cash used in operating activities	(1,109,029)	(109,079)
Net cash used in investing activities	(1,331,564)	(272,925)
Net cash generated from financing activities	1,463,664	461,312
Effect of foreign exchange rate changes	(61,336)	(19,874)
Net increase (decrease) in cash and cash equivalents	<u>(1,038,265)</u>	<u>59,434</u>

c) Equity of disposal group classified as amounts recognized in other comprehensive income and accumulated in equity relating to non-current assets held for sale :

	<u>December 31,</u>
	<u>2016</u>
	NT\$000
Foreign currency translation reserve	<u>287,645</u>

d) Cumulative income or expense recognized in other comprehensive income relating to disposal group classified as held for sale:

	<u>2016</u>	<u>2017</u>
	NT\$000	NT\$000
Exchange differences on translation of foreign operations	<u>(195,972)</u>	<u>(287,645)</u>

e) The results of discontinued operations are as follows:

	<u>2016</u>	<u>2017</u>
	NT\$000	NT\$000
Revenue	1,005,166	227,095
Cost of revenue	(986,004)	(195,078)
Operating expenses	(179,178)	(58,840)
Other operating income (expenses), net	13,753	1,429
Non-operating income (expenses), net	24,158	(2,887)
Loss from discontinued operations before income tax	(122,105)	(28,281)
Income tax expense	—	—
Loss from discontinued operations after income tax	(122,105)	(28,281)
Gain on disposal of discontinued operations	—	1,843,234
Profit (loss) from discontinued operations	<u>(122,105)</u>	<u>1,814,953</u>

Discontinued operations' revenue is mainly from the segments of testing and assembly.

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21. Issued capital

	<u>December 31, 2016</u> in thousands	<u>December 31, 2017</u> in thousands	<u>December 31, 2018</u> in thousands
Authorized shares			
Ordinary shares	1,450,000	970,000	970,000
	<u>December 31, 2016</u> in thousands	<u>December 31, 2017</u> in thousands	<u>December 31, 2018</u> in thousands
Ordinary shares issued and fully paid			
Ordinary shares	886,966	886,297	752,858
Issued capital (NT\$000)	<u>8,869,663</u>	<u>8,862,971</u>	<u>7,528,577</u> (US\$245,952 thousand)

The par value of ordinary shares issued was NT\$10 per share.

The movement of ordinary shares issued is set out below:

	<u>2016</u> in thousands	<u>2017</u> in thousands	<u>2018</u> in thousands
January 1	896,206	886,966	886,297
Restricted shares	435	—	—
Unearned restricted shares – cancelled	—	(669)	(502)
Share cancellation	—	—	(4,515)
Issuance of ordinary shares for capital reorganization (Note 31)	512,405	—	—
Cancellation of ordinary shares from capital reorganization (Note 31)	(522,080)	—	—
Capital reduction	—	—	(128,422)
December 31	<u>886,966</u>	<u>886,297</u>	<u>752,858</u>

On February 4, 2016 and May 12, 2016, the Board of Directors of the Company approved the share repurchase programs for repurchase of ordinary shares by the Company of up to NT\$600 million and NT\$600 million, respectively. As of December 31, 2016 and 2017, 30,000 thousand shares were repurchased and recorded as treasury stock.

On October 31, 2016, the Company's former parent company, ChipMOS Bermuda was merged with and into the Company, with the latter being the surviving company. Please refer to Note 31 for details of the capital reorganization. Pursuant to the Merger, the Company issued 21,775,257 units of ADSs (25,620,267 units of ADSs before capital reduction adjustment), which were listed on the NASDAQ Global Select Market, and each ADS represents 20 ordinary shares of the Company. As of December 31, 2018, the outstanding ADSs were approximately 5,309,826 units representing 106,197 thousand ordinary shares of the Company. The major terms and conditions of the ADSs are summarized as follows:

a) Voting rights:

ADS holders will have no right to directly vote in shareholders' meetings with respect to the deposited shares. The depository bank shall vote on behalf of the ADS holders or provide voting instruction to the designated person of the Company. The depository bank shall vote in the manner as instructed by ADS holders.

b) Distribution of dividends:

ADS holders are deemed to have the same rights as holders of ordinary shares with respect to the distribution of dividends.

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21. Issued capital (continued)

In order to adjust capital structure and increase return of equity, the Company's shareholders adopted a resolution on June 26, 2018 to reduce capital stock and return cash to shareholders. Subsequently, the record date of the capital reduction was fixed on August 15, 2018, and capital was reduced approximately 15% amounted to NT\$1,329,446 thousand (US\$43,432 thousand) consisting of 132,945 thousand ordinary shares.

22. Capital surplus and retained earnings

The reconciliation between the opening and closing balances of each component of the Group's consolidated equity is set out in the consolidated statements of changes in equity.

a) Capital surplus

Details of the Group's capital surplus are set out below:

	<u>December 31,</u> <u>2016</u> <u>NT\$000</u>	<u>December 31,</u> <u>2017</u> <u>NT\$000</u>	<u>December 31,</u> <u>2018</u> <u>NT\$000</u>	<u>December 31,</u> <u>2018</u> <u>US\$000</u>
Share premium	6,473,471	5,873,743	5,873,743	191,890
Restricted shares	408,051	390,401	382,506	12,496
Others	7,304	7,304	7,304	239
	<u>6,888,826</u>	<u>6,271,448</u>	<u>6,263,553</u>	<u>204,625</u>

Pursuant to the ROC Company Act, any capital surplus arising from paid-in capital in excess of par value on issuance of ordinary shares and donations can be used to cover accumulated deficits or to issue new stocks or cash to shareholders in proportion to their share ownership, provided that the Company has no accumulated deficits. Furthermore, the ROC Securities and Exchange Act requires that the amount of capital surplus to be capitalized mentioned above may not exceed 10% of the paid-in capital each year. Capital surplus may not be used to cover accumulated deficits unless the legal reserve is insufficient.

b) Retained earnings

(a) According to the Company's Articles of Incorporation, current year's earnings before tax, if any, shall be distributed in the following order:

- i) Pay all taxes and duties;
- ii) Offset prior years' operating losses, if any;
- iii) Set aside 10% of the remaining amount after deducting i) and ii) as legal reserve;
- iv) Appropriate or reverse a certain amount as special reserve according to the relevant regulations;
- v) After items i), ii), iii) and iv) were deducted, the remaining amount may be distributed as shareholders' dividend.

(b) The Company's dividend policy is summarized below: as the Company operates in a volatile business environment, the dividend is distributed taking into consideration the Company's financial structure, operating results and future expansion plans. The earnings distribution of the Company may be made by way of cash dividends or stock dividends; provided that cash dividends shall account for at least 10% of the total dividends distributed. The earnings distribution will be proposed by the Board of Directors and approved at the shareholders' meeting.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

22. Capital surplus and retained earnings (continued)

b) Retained earnings (continued)

- (c) Legal reserve can only be used to offset deficits or increase capital in issuing ordinary shares or in distribution cash. The amount of legal reserve that may be used to increase capital or distribute cash shall be limited to the portion of the reserve balance exceeding 25% of the capital stock.
- (d) In accordance with the regulations, the Company must set aside a special reserve from the debit balance on other equity items at the statements of financial position date before distributing earnings. When the debit balance on other equity items is reversed subsequently, the reversed amount may be included in the distributable earnings.
- (e) The distribution of 2015, 2016 and 2017 were resolved at the shareholders' meetings on May 31, 2016, May 26, 2017 and June 26, 2018, respectively. Details are summarized below:

	2015		2016		2017	
	Amount NT\$000	Distribution per share NT\$	Amount NT\$000	Distribution per share NT\$	Amount NT\$000	Distribution per share NT\$
Legal reserve	223,047	—	28,680	—	302,653	—
Cash dividend	1,792,553	2.09	257,026	0.30	256,806	0.30
Cash distribution from capital surplus	—	—	599,728	0.70	—	—

23. Treasury stock

The movement of treasury stock is set out below:

	2016		2017		2018		
	Shares (in thousands)	Amount (NT\$000)	Shares (in thousands)	Amount (NT\$000)	Shares (in thousands)	Amount (NT\$000)	Amount (US\$000)
January 1	—	—	30,085	1,007,654	30,085	1,007,654	32,919
Treasury stock (repurchased)	30,085	1,007,654	—	—	—	—	—
Capital reduction	—	—	—	—	(4,515)	(45,151)	(1,475)
December 31	<u>30,085</u>	<u>1,007,654</u>	<u>30,085</u>	<u>1,007,654</u>	<u>25,570</u>	<u>962,503</u>	<u>31,444</u>

Pursuant to the ROC Securities and Exchange Act, the number of shares repurchased as treasury stock should not exceed 10% of the number of the Company's issued shares and the amount repurchased may not exceed the sum of retained earnings, paid-in capital in excess of par value and realized capital surplus.

Pursuant to the ROC Securities and Exchange Act, treasury stock may not be pledged as collateral and is not entitled to dividends before it is reissued.

Pursuant to the ROC Securities and Exchange Act, treasury stock should be reissued to the employees within three years from the reacquisition date and shares not reissued within the three-year period are to be retired. Treasury stock to enhance the Company's credit rating and the stockholders' equity should be retired within six months from acquisition.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

24. Long-term bank loans

<u>Type of loans</u>	<u>Period and payment term</u>	<u>December 31, 2017 NT\$000</u>	<u>December 31, 2018 NT\$000</u>	<u>December 31, 2018 US\$000</u>
Syndicated bank loan	Borrowing period is from May 30, 2018 to May 30, 2023; interest is repayable monthly; principal is repayable semi-annually from November 30, 2018	—	9,822,000	320,876
Syndicated bank loan	Borrowing period is from June 30, 2016 to June 30, 2021; interest is repayable monthly; principal is repayable semi-annually from December 30, 2017	9,675,301	—	—
Less: Fee on syndicated bank loan		(33,280)	(32,482)	(1,061)
Less: Current portion (fee included)		(2,143,168)	(747,422)	(24,418)
		<u>7,498,853</u>	<u>9,042,096</u>	<u>295,397</u>
Interest rate range		<u>1.7895%</u>	<u>1.7895%</u>	<u>1.7895%</u>
Unused credit lines of long-term bank loans NT\$000		<u>2,400,000</u>	<u>1,800,000</u>	

On May 15, 2018, the Company entered into a syndicated loan with eleven banks in Taiwan, including Taiwan Cooperative Bank, in the amount of NT\$12 billion with a term of five years. Funding from this syndicated loan was used to repay the existing debt of financial institutions and broaden the Company's working capital. Pursuant to the syndicated loan agreement, the Group is required to maintain certain financial ratios including current ratio, interest protection multiples and debt to equity ratio during the loan periods.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

24. Long-term bank loans (continued)

On May 16, 2016, the Company entered into a syndicated loan with ten banks in Taiwan, including Land Bank of Taiwan, in the amount of NT\$13.2 billion with a term of five years. Funding from this syndicated loan was used to repay the prior syndicated loan in 2014 and broaden the Company's working capital. Pursuant to the syndicated loan agreement, the Group is required to maintain certain financial ratios including current ratio, interest protection multiples and debt to equity ratio during the loan periods. The syndicated loan was fully repaid in May 2018.

As of December 31, 2017 and 2018, the Group was in compliance with the financial ratio requirements.

The Group's bank loans are mortgaged by certain land, buildings and equipment as collateral (Note 34).

Details of the repayment schedule in respect of the bank loans are as follows:

	<u>December 31,</u> <u>2017</u>	<u>December 31,</u> <u>2018</u>	<u>December 31,</u> <u>2018</u>
	NT\$000	NT\$000	US\$000
Within 1 year	2,143,168	747,422	24,418
1 to 5 years	7,498,853	9,042,096	295,397
	<u>9,642,021</u>	<u>9,789,518</u>	<u>319,815</u>

25. Retirement benefit plans

a) Defined benefit plans

- (a) The Company has a defined benefit pension plan in accordance with the Labor Standards Act, covering all regular employees' service years prior to the enforcement of the Labor Pension Act on July 1, 2005 and service years thereafter of employees who chose to continue to be subject to the pension mechanism under the Labor Standards Act. Under the defined benefit pension plan, two units are accrued for each year of service for the first 15 years and one unit for each additional year thereafter, subject to a maximum of 45 units. Pension benefits are based on the number of units accrued and the average monthly salaries and wages of the last 6 months prior to retirement.

The Company contributes monthly an amount equal to 2% of the employees' monthly salaries and wages to the pension fund deposited with Bank of Taiwan, the trustee, under the name of the independent pension fund committee. Also, the Company would assess the balance in the aforementioned labor pension reserve account by the end of every year. If the account balance is insufficient to pay the pension calculated by the aforementioned method, to the employees expected to be qualified for retirement next year, the Company will make contribution to cover the deficit by March of following year.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

25. Retirement benefit plans (continued)

a) Defined benefit plans (continued)

(b) The amounts recognized in the statements of financial position are as follows:

	December 31, 2017	December 31, 2018	December 31, 2018
	NT\$000	NT\$000	US\$000
Present value of defined benefit obligations	(838,543)	(910,081)	(29,731)
Fair value of plan assets	360,017	389,316	12,718
Net defined benefit liability	<u>(478,526)</u>	<u>(520,765)</u>	<u>(17,013)</u>

(c) Movements in net defined benefit liability are as follows:

	2017		
	Present value of defined benefit obligations	Fair value of plan assets	Net defined benefit liability
	NT\$000	NT\$000	NT\$000
January 1	(894,163)	347,195	(546,968)
Current service cost	(386)	—	(386)
Interest (expense) income	(13,236)	5,226	(8,010)
	<u>(907,785)</u>	<u>352,421</u>	<u>(555,364)</u>
Remeasurements:			
Return of plan assets (excluding the amount included in interest income or expense)	—	(1,842)	(1,842)
Financial assumption movement effect	28,506	—	28,506
Experience adjustments	24,174	—	24,174
	<u>52,680</u>	<u>(1,842)</u>	<u>50,838</u>
Pension fund contribution	—	26,000	26,000
Paid pension	16,562	(16,562)	—
December 31	<u>(838,543)</u>	<u>360,017</u>	<u>(478,526)</u>

	2018			
	Present value of defined benefit obligations	Fair value of plan assets	Net defined benefit liability	
	NT\$000	NT\$000	NT\$000	US\$000
January 1	(838,543)	360,017	(478,526)	(15,633)
Current service cost	(382)	—	(382)	(12)
Interest (expense) income	(14,429)	6,291	(8,138)	(266)
	<u>(853,354)</u>	<u>366,308</u>	<u>(487,046)</u>	<u>(15,911)</u>
Remeasurements:				
Return of plan assets (excluding the amount included in interest income or expense)	—	8,145	8,145	266
Financial assumption movement effect	(56,934)	—	(56,934)	(1,860)
Experience adjustments	(11,172)	—	(11,172)	(365)
	<u>(68,106)</u>	<u>8,145</u>	<u>(59,961)</u>	<u>(1,959)</u>
Pension fund contribution	—	26,242	26,242	857
Paid pension	11,379	(11,379)	—	—
December 31	<u>(910,081)</u>	<u>389,316</u>	<u>(520,765)</u>	<u>(17,013)</u>

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

25. Retirement benefit plans (continued)

a) Defined benefit plans (continued)

- (d) The Bank of Taiwan was commissioned to manage the fund of the Company's defined benefit pension plan in accordance with the fund's annual investment and utilization plan and the "Regulations for Revenues, Expenditures, Safeguard and Utilization of the Labor Retirement Fund" (Article 6: The scope of utilization for the fund includes deposit in domestic or foreign financial institutions, investment in domestic or foreign listed, over-the-counter, or private placement equity securities, investment in domestic or foreign real estate securitization products, etc.). With regard to the utilization of the fund, its minimum earnings in the annual distributions on the final financial statements shall be no less than the earnings attainable from the amounts accrued from two-year time deposits with the interest rates offered by local banks. If the earning is less than aforementioned rates, government shall make payment for the deficit after authorized by the authority. The Company has no right to participate in managing and operating that fund and hence the Company is unable to disclose the classification of the fair value of plan asset in accordance with IAS 19 "Employee Benefits" paragraph 142. The constitution of fair value of plan assets as of December 31, 2017 and 2018 is given in the Annual Labor Retirement Fund Utilization Report announced by the government.

- (e) The principal actuarial assumptions used were as follows:

	<u>2017</u>	<u>2018</u>
Discount rate	1.75%	1.25%
Future salary increases	3.50%	3.50%

Assumptions regarding future mortality are set based on actuarial advice in accordance with published statistics and experience in each territory.

Because the main actuarial assumption changed, the present value of defined benefit obligations is affected. The sensitivity analysis of present value of defined benefit obligations effected by the changes of significant actuarial assumptions at December 31, 2017 and 2018 are shown below:

	<u>Discount rate</u>		<u>Future salary increase</u>	
	<u>Increase 0.25%</u>	<u>Decrease 0.25%</u>	<u>Increase 0.25%</u>	<u>Decrease 0.25%</u>
December 31, 2017				
Effect on present value of defined benefit obligations	<u>(27,192)</u>	<u>28,506</u>	<u>27,955</u>	<u>(26,816)</u>
December 31, 2018				
Effect on present value of defined benefit obligations	<u>(29,052)</u>	<u>30,430</u>	<u>29,692</u>	<u>(28,513)</u>

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

25. Retirement benefit plans (continued)

a) Defined benefit plans (continued)

(e) The principal actuarial assumptions used were as follows (continued):

The sensitivity analysis above is based on a change in an assumption while holding all other assumptions constant. In practice, changes in some of the assumptions may be correlated. The method of sensitivity analysis and the method of calculating net defined benefit liability in the statements of financial position are the same.

(f) The Company expects to make contributions of NT\$27,160 thousand (US\$887 thousand) during 2019.

(g) As of December 31, 2018, the weighted average duration of that retirement plan is 13.2 years. The analysis of timing of the future pension payment is as follows:

	December 31, 2018	
	NT\$000	US\$000
Within 1 year	32,904	1,075
1-2 years	35,835	1,170
2-5 years	105,665	3,452
5-10 years	189,400	6,188
	<u>363,804</u>	<u>11,885</u>

b) Defined contribution plans

Effective July 1, 2005, the Company established a defined contribution pension plan (the "New Plan") under the Labor Pension Act, covering all regular employees with ROC nationality. Under the New Plan, the Company contributes monthly an amount based on 6% of the employees' monthly salaries and wages to the employees' individual pension accounts at the Bureau of Labor Insurance. The benefits accrued are paid monthly or in lump sum upon termination of employment. The pension costs under defined contribution pension plans of the Company for the years ended December 31, 2017 and 2018 were NT\$190,106 thousand and NT\$193,047 thousand (US\$6,307 thousand), respectively.

26. Other Payables

	December 31, 2017	December 31, 2018	December 31, 2018
	NT\$000	NT\$000	US\$000
Salaries and bonus payable	601,239	595,575	19,457
Interest payable	2,854	963	31
Pension payable	32,402	32,038	1,047
Employees' compensation payable	371,912	212,391	6,939
Directors' remuneration payable	18,596	9,951	325
Other expense payable	953,179	827,564	27,036
	<u>1,980,182</u>	<u>1,678,482</u>	<u>54,835</u>

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

27. Current provisions

Movements in provisions are as follows:

	2018	
	Provisions for deficiency compensation	
	NT\$000	US\$000
January 1	57,155	1,867
Provision	14,211	465
Reversal	(24,451)	(799)
Payment	(17,563)	(574)
December 31	<u>29,352</u>	<u>959</u>

By adopting IFRS 15, the Group's provision for sales allowance is presented as "Current refund liabilities" from January 1, 2018, which was previously presented as "Current provisions". Information is provided in Note 28.

Please refer to Note 2 e) for detailed information of provisions for deficiency compensation.

28. Current refund liabilities

Movements in refund liabilities are as follows:

	2018	
	Provisions for sales allowance	
	NT\$000	US\$000
January 1	70,156	2,292
Provision	44,950	1,468
Reversal	(7,413)	(242)
Payment	(75,066)	(2,452)
December 31	<u>32,627</u>	<u>1,066</u>

Please refer to Note 2 e) for detailed information of refund liabilities.

29. Short-term bank loans

	December 31, 2017	December 31, 2018	December 31, 2018
	NT\$000	NT\$000	US\$000
Unsecured bank loans	<u>969,353</u>	<u>—</u>	<u>—</u>
Interest rate range	0.55%~1.71%	—	—

Unused credit lines of short-term bank loans are as follows:

	December 31, 2017	December 31, 2018
	NT\$000	US\$000
NT\$000	3,028,357	3,252,500
US\$000	80,000	90,000

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

30. Significant commitments and contingencies

Operating leases commitments

ChipMOS Taiwan entered into several operating lease contracts for land. These renewable operating leases will expire by 2032 and 2034.

ChipMOS USA entered into several operating lease contracts for office space. These renewable operating leases will expire by 2019 and 2020.

Future minimum lease obligation payable under those leases are as follows:

	<u>December 31,</u> <u>2017</u>	<u>December 31,</u> <u>2018</u>	<u>December 31,</u> <u>2018</u>
	NT\$000	NT\$000	US\$000
Within 1 year	39,342	68,631	2,242
1 to 5 years	130,182	140,137	4,578
Over 5 years	139,899	111,446	3,641
	<u>309,423</u>	<u>320,214</u>	<u>10,461</u>

Capital commitments

Capital expenditures that are contracted for, but not provided for are as follows:

	<u>December 31,</u> <u>2017</u>	<u>December 31,</u> <u>2018</u>	<u>December 31,</u> <u>2018</u>
	NT\$000	NT\$000	US\$000
Property, plant and equipment	<u>2,178,262</u>	<u>2,508,797</u>	<u>81,960</u>

Other commitments

A letter of guarantee was issued by Bank of Taiwan to the Customs Administration of the Ministry of Finance for making payment of customs-duty deposits when importing. The amount of letter of guarantee will occupy the credit lines for short-term loans of ChipMOS Taiwan. As of December 31, 2017 and 2018, the amount of NT\$97,500 thousand and NT\$97,500 thousand (US\$3,185 thousand), respectively are guaranteed by Bank of Taiwan.

As described in Note 31, as of October 31, 2016, the Company merged with its former parent company, ChipMOS Bermuda and as a result, the Company deducted unappropriated retained earnings by NT\$5,052,343 thousand. The Company has filed an application to the National Taxation Bureau of the Northern Area, Ministry of Finance to apply the accumulated deficit amount, derived from subtracting the aforementioned amount from unappropriated retained earnings generated prior to year 2015 (not including 2015 unappropriated retained earnings), as a deduction in the calculation of years 2015 and 2016 additional 10% tax on unappropriated retained earnings.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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31. Capital reorganization

To integrate resources, the Company's former parent company, ChipMOS Bermuda, was merged with and into the Company as of October 31, 2016, the record date of the Merger, with the latter being the surviving entity and ChipMOS Bermuda being the dissolved entity. Under the Merger Agreement, each shareholder of ChipMOS Bermuda is entitled to receive, with respect to each ChipMOS Bermuda share, 0.9355 units of the Company's newly-issued ADSs trading on the NASDAQ Global Select Market (each ADS unit represents 20 shares of the Company's ordinary shares) and US\$3.71 in cash. The Company issued 21,775,257 units of ADSs (25,620,267 units of ADSs representing 512,405 thousand ordinary shares before capital reduction adjustment) and paid US\$101,657 thousand in cash (equivalent to NT\$3,208,310 thousand) as the total consideration. In addition, the Company paid NT\$133,311 thousand directly attributable transaction cost for the capital reorganization. As the result, the Company paid NT\$3,341,621 thousand in cash for the capital reorganization.

The Company issued 512,405 thousand shares for the capital reorganization, and reduced capital by cancelling 522,080 thousand shares originally held by ChipMOS Bermuda. After the capital reorganization, the Company's shares was net decreased by 9,675 thousand shares. When cancelling treasury stocks, the Company deducted capital surplus equal to the proportion of cancelled shares. Due to the deficit in capital surplus, the Company deducted unappropriated retained earnings by NT\$5,052,343 thousand.

As of October 30, 2016, the ending balance of "Predecessors' interests" was NT\$1,692,918 thousand, which represents ChipMOS Bermuda's net assets as if it had always been combined. The amount has been eliminated in the record date of the Merger.

32. Supplementary cash flow information

Partial cash paid for investing and financing activities

a) Property, plant and equipment

	2016	2017	2018	2018
	NT\$000	NT\$000	NT\$000	US\$000
Purchase in property, plant and equipment	4,690,995	4,849,331	4,945,570	161,567
Add: Beginning balance of payable to contractors and equipment suppliers	523,962	839,983	713,313	23,303
Add: Beginning balance of lease payable	—	94,952	29,842	975
Less: Ending balance of payable to contractors and equipment suppliers	(647,486)	(878,065)	(1,516,735)	(49,550)
Less: Ending balance of lease payable	(96,006)	(84,192)	(17,792)	(581)
Less: Transfer from prepaid equipment (shown as "Other non-current assets")	—	(139,304)	—	—
Cash paid for acquisition of property, plant and equipment	<u>4,471,465</u>	<u>4,682,705</u>	<u>4,154,198</u>	<u>135,714</u>

b) Capital reorganization

	2016	2017	2018	2018
	NT\$000	NT\$000	NT\$000	US\$000
Net assets acquired from ChipMOS Bermuda	12,987,736	—	—	—
Less: Issuance of shares	(9,779,426)	—	—	—
Cash consideration	3,208,310	—	—	—
Directly attributable transaction cost	133,311	—	—	—
Cash paid for capital reorganization	<u>3,341,621</u>	<u>—</u>	<u>—</u>	<u>—</u>

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

32. Supplementary cash flow information (continued)

c) Disposal of a subsidiary

	<u>2016</u> <u>NT\$000</u>	<u>2017</u> <u>NT\$000</u>	<u>2018</u> <u>NT\$000</u>	<u>2018</u> <u>US\$000</u>
Disposal of a subsidiary	—	2,166,151	—	—
Add: Ending balance of other payables*	—	64,393	—	—
Less: Cash and cash equivalents of discontinued operations	—	(449,331)	—	—
Cash received from disposal of a subsidiary	<u>—</u>	<u>1,781,213</u>	<u>—</u>	<u>—</u>

* According to the Equity Interest Transfer Agreement, the Group accrued the estimated payment to investor based on the operating performance of Unimos Shanghai and as a result, cash received from disposal of discontinued operations amounted to NT\$64,393 thousand was returned in 2018.

d) Reconciliation of liabilities arising from financing activities

	<u>As of January 1,</u> <u>2017</u> <u>NT\$000</u>	<u>Cash flow</u> <u>NT\$000</u>	<u>Non-Cash</u> <u>flow</u> <u>Amortization of</u> <u>loans fee</u> <u>NT\$000</u>	<u>As of December 31,</u> <u>2017</u> <u>NT\$000</u>
Long-term bank loans (include the current portion)	10,750,005	(1,124,699)	16,715	9,642,021
Short-term bank loans	—	969,353	—	969,353
Guarantee deposits	1,404	(33)	—	1,371
	<u>10,751,409</u>	<u>(155,379)</u>	<u>16,715</u>	<u>10,612,745</u>

	<u>As of January 1,</u> <u>2018</u> <u>NT\$000</u>	<u>Cash flow</u> <u>NT\$000</u>	<u>Non-Cash</u> <u>flow</u> <u>Amortization of</u> <u>loans fee</u> <u>NT\$000</u>	<u>As of December 31,</u> <u>2018</u> <u>NT\$000</u>	<u>US\$000</u>
Long-term bank loans (include the current portion)	9,642,021	110,250	37,247	9,789,518	319,815
Short-term bank loans	969,353	(969,353)	—	—	—
Guarantee deposits	1,371	(279)	—	1,092	35
	<u>10,612,745</u>	<u>(859,382)</u>	<u>37,247</u>	<u>9,790,610</u>	<u>319,850</u>

33. Related party transactions

a) Parent and ultimate controlling party

On October 31, 2016, the Company's former parent company, ChipMOS Bermuda, was merged with and into the Company through a share exchange with the latter being the surviving entity and ChipMOS Bermuda being the dissolved entity. After the Merger, the Company has neither a parent company nor an ultimate controlling party. The transactions between the Company and its subsidiaries were eliminated in the accompanying consolidated financial statements and were not disclosed herein. The transactions between the Group and other related parties are as follows.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
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33. Related party transactions (continued)

b) Names of related parties and relationship

<u>Name</u>	<u>Relationship</u>
Unimos Shanghai	Associate
JMC	Associate

c) Significant related party transactions

(a) Subcontracting fee

	<u>2016</u> <u>NT\$000</u>	<u>2017</u> <u>NT\$000</u>	<u>2018</u> <u>NT\$000</u>	<u>2018</u> <u>US\$000</u>
Unimos Shanghai	—	41,183	17	1

(b) Purchases of materials

	<u>2016</u> <u>NT\$000</u>	<u>2017</u> <u>NT\$000</u>	<u>2018</u> <u>NT\$000</u>	<u>2018</u> <u>US\$000</u>
JMC	—	130	132,494	4,329
Unimos Shanghai	—	906	3,775	123
	—	1,036	136,269	4,452

Purchases of materials from associates are based on normal commercial terms and conditions. The payment terms of the purchases from associates are 30 to 90 days, which are the same as third party suppliers.

(c) Disposal of property, plant and equipment

	<u>2017</u>	
	<u>Selling price</u> <u>NT\$000</u>	<u>Gain on disposal</u> <u>NT\$000</u>
Unimos Shanghai	21,982	20,240

There were no disposal of property, plant, and equipment to related parties for the years ended December 31, 2016 and 2018.

(d) Acquisition of property, plant and equipment

	<u>2018</u> <u>NT\$000</u>	<u>2018</u> <u>US\$000</u>
Unimos Shanghai	61,904	2,022

There were no acquisition of property, plant, and equipment from related parties for the years ended December 31, 2016 and 2017.

(e) Acquisition of financial assets

In June 2017 and January 2018, ChipMOS BVI participated in Unimos Shanghai's increase of paid-in capital based on its shareholding amounted to NT\$1,373,486 thousand and NT\$794,694 thousand (US\$25,962 thousand), please refer to Note 14.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
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33. Related party transactions (continued)

(f) Patent licensing agreement

In May 2016, the Company and Unimos Shanghai entered into a patent licensing agreement. Under the agreement, Unimos Shanghai paid the Company a licensing fee in the aggregate total of US\$2,500 thousand (amended to US\$1,000 thousand in January 2017) which was accounted for as receipts in advance and long-term deferred revenue, and recognized royalty income for 10 years from the effective date. In addition, Unimos Shanghai shall pay the Company a running royalty for the foregoing license equivalent to 0.5% of the total revenue from the licensed products. Given that the related production lines of Unimos Shanghai have begun its operations in April 2017, the Company recognized royalty income henceforth. In April 2018, both parties agreed to terminate the agreement after an amicable negotiation, hence all remaining receipts in advance and long-term deferred revenue were recognized as royalty income. The Company recognized receipts in advance and long-term deferred revenue amounted to NT\$3,018 thousand and NT\$24,898 thousand, respectively, as of December 31, 2017 and royalty income amounted to NT\$2,828 thousand for the year then ended. The Company recognized receipts in advance and long-term deferred revenue amounted to nil as of December 31, 2018 and royalty income amounted to NT\$30,683 thousand (US\$1,002 thousand) for the year then ended.

In October 2011, ChipMOS Bermuda and Unimos Shanghai entered into a patent licensing agreement which has a term of 10 years starting from August 1, 2012. Under the agreement, Unimos Shanghai will pay ChipMOS Bermuda a royalty in the aggregate total of RMB 27,400 thousand, which was accounted as receipts in advance and payable in 40 quarterly installments of RMB 685 thousand. The rights and obligations of this agreement have been transferred to the Company on October 31, 2016. In March 2017, Unimos Shanghai was derecognized from the consolidated financial statements and recorded as "Investment in associates", therefore, royalty income for the three months ended March 31, 2017 were eliminated on a consolidated basis. The Company recognized receipts in advance amounted to NT\$1,039 thousand as of December 31, 2017 and royalty income amounted to NT\$9,170 thousand for the year then ended. The Company recognized receipts in advance amounted to NT\$1,013 thousand (US\$33 thousand) as of December 31, 2018 and royalty income amounted to NT\$12,506 thousand (US\$409 thousand) for the year then ended.

d) Key management personnel compensation

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2018</u>
	NT\$000	NT\$000	NT\$000	US\$000
Salaries and short-term employee benefits	152,319	188,105	151,095	4,936
Post-employment compensation	3,335	5,622	2,067	68
Share-based payments	109,255	18,736	6,763	221
	<u>264,909</u>	<u>212,463</u>	<u>159,925</u>	<u>5,225</u>

34. Pledged or mortgaged assets

The Group provided certain assets as collateral mainly for long-term bank loans (Note 24) and leases, which were as follows:

	<u>December 31,</u>	<u>December 31,</u>	<u>December 31,</u>
	2017	2018	2018
	NT\$000	NT\$000	US\$000
Non-current financial assets at amortized cost	—	68,388	2,234
Property, plant and equipment, net (Note 16)	7,164,089	9,672,238	315,983
Other non-current financial assets	70,241	—	—
	<u>7,234,330</u>	<u>9,740,626</u>	<u>318,217</u>

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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35. Financial risk management and fair values of financial instruments

a) Financial instruments by category

	<u>December 31,</u> <u>2017</u>	<u>December 31,</u> <u>2018</u>	<u>December 31,</u> <u>2018</u>
	NT\$000	NT\$000	US\$000
<u>Financial assets</u>			
Financial assets at fair value through profit or loss			
Financial assets mandatorily measured at fair value through profit or loss	—	11,471	375
Financial assets at fair value through other comprehensive income			
Designation of equity instruments	—	174,357	5,696
Available-for-sale financial assets			
Non-current financial assets carried at cost	20,890	—	—
Financial assets at amortized cost/loans and receivables			
Cash and cash equivalents	8,035,714	4,642,522	151,667
Financial assets at amortized cost	—	268,271	8,763
Accounts and notes receivable	4,015,734	4,747,288	155,090
Accounts receivable – related parties	11	140	5
Other receivables	56,716	63,037	2,059
Other receivables – related parties	4,534	3,131	102
Refundable deposits	21,342	22,006	719
Other financial assets	70,241	—	—
	<u>12,225,182</u>	<u>9,932,223</u>	<u>324,476</u>
	<u>December 31,</u> <u>2017</u>	<u>December 31,</u> <u>2018</u>	<u>December 31,</u> <u>2018</u>
	NT\$000	NT\$000	US\$000
<u>Financial liabilities</u>			
Financial liabilities at amortized cost			
Short-term bank loans	969,353	—	—
Accounts payable	687,960	637,271	20,819
Accounts payable – related parties	226	347	11
Payables to contractors and equipment suppliers	713,313	1,516,735	49,550
Other payables	1,980,182	1,678,482	54,835
Other payables – related parties	36	218	7
Long-term bank loans (including current portion)	9,642,021	9,789,518	319,815
Guarantee deposits	1,371	1,092	35
	<u>13,994,462</u>	<u>13,623,663</u>	<u>445,072</u>

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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35. Financial risk management and fair values of financial instruments (continued)

b) Financial risk management

The Group's risk management objective is to manage the market risk, credit risk and liquidity risk related to its operating activities. The Group identifies, measures and manages the aforementioned risks based on policy and risk appetite.

The Group has established appropriate policies, procedures and internal controls for financial risk management. Before entering into significant financial transactions, due approval process by the Board of Directors must be carried out based on related protocols and internal control procedures. The Group complies with its financial risk management policies at all times.

(a) Market risk

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risks comprise foreign currency risk, interest rate risk, and other price risk.

i) Foreign currency risk

The Group's exposure to the risk of changes in foreign exchange rates relates primarily to the Group's operating activities (when revenue or expense is denominated in a different currency from the Group's functional currency) and the Group's net investments in foreign operations.

The Group applies natural hedges from using accounts receivable and accounts payable denominated in the same currency. However, this natural hedge does not concur with the requirement for hedge accounting. Furthermore, as net investments in foreign operations are for strategic purposes, they are not hedged by the Group.

The Group's foreign currency exposure gives rise to market risks associated with exchange rate movements against the NT dollar for cash and cash equivalents, accounts receivable, other receivables, bank loans, accounts payable and other payables.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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35. Financial risk management and fair values of financial instruments (continued)

b) Financial risk management (continued)

(a) Market risk (continued)

i) Foreign currency risk (continued)

The Group's businesses involve some non-functional currency operations. The information on the assets and liabilities denominated in foreign currencies whose values would be materially affected by the exchange rate fluctuations is as follows:

	December 31, 2017		
	Foreign currency	Exchange rate	Carrying amount (NT\$000)
<u>Financial assets</u>			
Monetary items			
US\$000	208,066	29.7600	6,192,044
JPY000	798,254	0.2642	210,899
RMB000	167,484	4.5650	764,564
<u>Financial liabilities</u>			
Monetary items			
US\$000	16,036	29.7600	477,231
JPY000	1,071,432	0.2642	283,072

	December 31, 2018		
	Foreign currency	Exchange rate	Carrying amount (NT\$000)
<u>Financial assets</u>			
Monetary items			
US\$000	170,270	30.7150	5,229,843
JPY000	177,557	0.2782	49,396
RMB000	8,850	4.4720	39,577
<u>Financial liabilities</u>			
Monetary items			
US\$000	18,230	30.7150	559,934
JPY000	2,436,140	0.2782	677,734

The total exchange gain and loss recognized include realized and unrealized gain and loss arising from significant foreign exchange variation on the monetary items held by the Group for the years ended December 31, 2017 and 2018 amounted to loss of NT\$418,970 thousand and gain of NT\$93,104 thousand (US\$3,041 thousand), respectively.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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35. Financial risk management and fair values of financial instruments (continued)

b) Financial risk management (continued)

(a) Market risk (continued)

i) Foreign currency risk (continued)

The following table details the Group's exposure at the end of the reporting period to currency risk arising from recognized monetary assets or liabilities denominated in a currency other than the functional currency of the entity to which they relate.

	2017		Effect on other comprehensive income (NT\$000)
	Change in exchange rate	Effect on profit (NT\$000)	
<u>Financial assets</u>			
US\$000	5%	309,602	—
JPY000	5%	10,545	—
RMB000	5%	38,228	—
<u>Financial liabilities</u>			
US\$000	5%	23,862	—
JPY000	5%	14,154	—
2018			Effect on other comprehensive income (NT\$000)
	Change in exchange rate	Effect on profit (NT\$000)	
<u>Financial assets</u>			
US\$000	5%	261,492	—
JPY000	5%	2,470	—
RMB000	5%	1,979	—
<u>Financial liabilities</u>			
US\$000	5%	27,997	—
JPY000	5%	33,887	—

ii) Price risk

The Group's financial instruments, which are exposed to price risk, are the financial assets at fair value through profit or loss and financial assets at fair value through other comprehensive income. To manage its price risk arising from investments in financial instruments, the Group diversifies its portfolio. Diversification of the portfolio is in accordance with the limits set by the Group.

The Group's investments in financial instruments comprise foreign unlisted stocks and partnerships. The prices of financial instruments would change due to different valuation models and assumptions used. Analysis related to the effect on profit or other comprehensive income if these assumptions change is provided in Note 35 c) (g).

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

35. Financial risk management and fair values of financial instruments (continued)

b) Financial risk management (continued)

(a) Market risk (continued)

iii) Interest rate risk on cash flow and fair value

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's bank loans with floating interest rates.

The Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate bank loans.

At December 31, 2018, it is estimated that a general increase or decrease of 100 basis points (1%) in interest rates, with all other variables held constant, would decrease or increase the Group's profit by approximately NT\$98,220 thousand (US\$3,209 thousand) (2017: NT\$106,447 thousand).

(b) Credit risk

Credit risk is the risk that a counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Group is exposed to credit risk from its operating activities (primarily accounts and other receivables) and from its financing activities (primarily deposits with banks and financial instruments).

Each business unit performs ongoing credit evaluation of the debtors' financial condition according to the Group's established policy, procedures and control relating to customer credit risk management. The Group maintains an account for loss allowance based upon the available facts and circumstances, historical collection and write-off experiences of all trade and other receivables which consequently minimizes the Group's exposure to bad debts.

Credit risk from balances with banks and financial institutions is managed by the Group's finance unit in accordance with the Group's policy. Bank balances are held with financial institutions of good standing. The Group's exposure to credit risk arising from the default of counter-parties is limited to the carrying amount of these instruments.

The Group adopts the assumptions under IFRS 9 and the default is deemed to have occurred when the contract payments are past due over 90 days.

The Group categorized contract assets, accounts receivable and other receivables by characteristics of credit risk and applied the simplified approach using loss rate methodology to estimate expected credit loss.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

35. Financial risk management and fair values of financial instruments (continued)

b) Financial risk management (continued)

(b) Credit risk (continued)

The Group used the forecastability of business monitoring indicators to adjust historical and timely information to assess the default possibility of contract assets, accounts receivable and other receivables. On December 31, 2018, the loss rate methodology is as follows:

	December 31, 2018		
	Contract assets NT\$000	Accounts receivable (including related parties) NT\$000	Other receivables (including related parties) NT\$000
Expected loss rate	0.045%	0.045%	0.045%
Total carrying amount	299,970	4,747,974	66,181
Loss allowance	(135)	(2,141)	(13)

Under the simplified approach, movements in relation to loss allowance for contract assets, accounts receivable, and other receivables are as follows:

	2018		
	Contract assets NT\$000	Accounts receivable (including related parties) NT\$000	Other receivables (including related parties) NT\$000
January 1_ IAS 39	—	—	—
Adjustments for applying new standards	(115)	(1,819)	(7)
January 1_ IFRS 9	(115)	(1,819)	(7)
Provision for impairment loss	(20)	(322)	(7)
Reversal of impairment loss	—	—	1
December 31	(135)	(2,141)	(13)

For investments in financial assets at amortized cost, the credit rating levels are presented below:

	December 31, 2018			Total NT\$000
	12 months NT\$000	By lifetime		
		Increase in credit risk NT\$000	Impairment of credit NT\$000	
Financial assets at amortized cost Bank deposits (Note)	268,271	—	—	268,271

Note: Time deposits with contract period over three months and restricted bank deposits.

Information related to credit risk for the year ended December 31, 2017 is provided in Note 41.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

35. Financial risk management and fair values of financial instruments (continued)

b) Financial risk management (continued)

(c) Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in raising funds to meet commitments associated with financial instruments. The Group monitors and maintains adequate cash and banking facilities to finance the Group's operations. See Notes 24 and 29 about the unused credit lines of the Group.

The maturity profile of the Group's non-derivative financial liabilities as of December 31, 2017 and 2018 based on the contracted undiscounted payments is as follows:

	December 31, 2017			
	Within 1 year	1 to 5 years	Over 5 years	Total
	NT\$000	NT\$000	NT\$000	NT\$000
Short-term bank loans	971,813	—	—	971,813
Long-term bank loans (including current portion)	2,321,459	7,740,267	—	10,061,726
Accounts payable and payables to contractors and equipment suppliers (including related parties)	1,401,499	—	—	1,401,499
Other payables (including related parties)	1,980,218	—	—	1,980,218
Lease obligations payable	12,266	18,266	—	30,532
Guarantee deposits	—	—	1,371	1,371
	<u>6,687,255</u>	<u>7,758,533</u>	<u>1,371</u>	<u>14,447,159</u>

	December 31, 2018				
	Within 1 year	1 to 5 years	Over 5 years	Total	Total
	NT\$000	NT\$000	NT\$000	NT\$000	US\$000
Long-term bank loans (including current portion)	927,243	9,549,327	—	10,476,570	342,260
Accounts payable and payables to contractors and equipment suppliers (including related parties)	2,154,353	—	—	2,154,353	70,380
Other payables (including related parties)	1,678,700	—	—	1,678,700	54,842
Lease obligations payable	18,000	—	—	18,000	588
Guarantee deposits	—	—	1,092	1,092	35
	<u>4,778,296</u>	<u>9,549,327</u>	<u>1,092</u>	<u>14,328,715</u>	<u>468,105</u>

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

35. Financial risk management and fair values of financial instruments (continued)

- c) Fair value information
- (a) The different levels of inputs used in valuation techniques to measure fair value of financial and non-financial instruments are provided in Note 2 bb).
- (b) The carrying amounts of cash and cash equivalents, financial assets at amortized cost, contract assets, notes receivable, accounts receivable, other receivables, refundable deposits, bank loans, contract liabilities, accounts payable, payables to contractors and equipment suppliers, other payables, lease obligations payable and guarantee deposits are approximate to their fair values.
- (c) The related information of financial and non-financial instruments measured at fair value by level on the basis of the nature, characteristics and risks of the assets and liabilities are as follows:
- (i) The related information of natures of the assets and liabilities is as follows:

	December 31, 2018				
	Level 1 NT\$000	Level 2 NT\$000	Level 3 NT\$000	Total NT\$000	Total US\$000
Assets					
<u>Recurring fair value measurements</u>					
Financial assets at fair value through profit or loss					
- Foreign partnership interests	—	—	11,471	11,471	375
Financial assets at fair value through other comprehensive income					
- Foreign unlisted stocks	—	—	174,357	174,357	5,696
	<u>—</u>	<u>—</u>	<u>185,828</u>	<u>185,828</u>	<u>6,071</u>

There were no financial and non-financial instruments measured at fair value as of December 31, 2017.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
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35. Financial risk management and fair values of financial instruments (continued)

c) Fair value information (continued)

(ii) The methods and assumptions the Group used to measure fair value are as follows:

The fair value of the Group's financial instruments is measured by using valuation techniques or by reference to counterparty quotes. The fair value of financial instruments measured by using valuation techniques can be referred to current fair value of instruments with similar terms and characteristics in substance, discounted cash flow method or other valuation methods, including calculated by applying model using market information available at the consolidated statement of financial position date.

The Group's financial assets at fair value through profit or loss is measured by using the discounted cash flow method, which derives present value estimates by discounting expected future operating effectiveness and free cash flows projections.

The Group's financial assets at fair value through other comprehensive income is measured by the comparable company valuation (EV/EBITDA ratio and P/B ratio).

The Group takes into account adjustments for credit risks to measure the fair value of financial and non-financial instruments to reflect credit risk of the counterparty and the Group's credit quality.

(d) The following table shows the movements of Level 3 for the year ended December 31, 2018:

	December 31, 2018			
	Debt instruments		Equity instruments	
	NT\$000	US\$000	NT\$000	US\$000
January 1	—	—	—	—
Effects on initial application of IFRS 9	11,433	374	89,335	2,918
Gains or losses recognized in profit or loss				
Recorded as non-operating income (expenses)	38	1	—	—
Gains or losses recognized in other comprehensive income				
Recorded as unrealized gains on valuation of financial assets at fair value through other comprehensive income	—	—	85,022	2,778
December 31	<u>11,471</u>	<u>375</u>	<u>174,357</u>	<u>5,696</u>

There were no Level 3 movements for the year ended December 31, 2017.

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35. Financial risk management and fair values of financial instruments (continued)

c) Fair values information (continued)

- (e) The Group performs the fair value measurements being categorized within Level 3 with assistance from specialist. Such assessment is to ensure the valuation results are reasonable by applying independent information to make results close to current market conditions, confirming the resource of information is independent, reliable and in line with other resources and represented as the exercisable price, and frequently calibrating valuation model, performing back-testing, updating inputs used in the valuation model and making any other necessary adjustments to the fair value.
- (f) The following is the qualitative information and sensitivity analysis of changes in significant unobservable inputs under valuation model used in Level 3 fair value measurement:

	Fair value as of December 31, 2018 (NT\$000)	Valuation technique	Significant unobservable input	Range (weighted average method)	Relationship of inputs to fair value
Non-derivative debt instrument:					
Foreign partnership interests	11,471	Discounted cash flow	Discount rate	0.35%	The lower the discount rate, the higher the fair value
Non-derivative equity instrument:					
Foreign unlisted stocks	174,357	Comparable companies	Price to book ratio multiple	1.19	The higher the multiple, the higher the fair value
			Enterprise value to EBITDA multiple	7.69	The higher the multiple, the higher the fair value
			Discount for lack of marketability	15.80%	The higher the discount for lack of marketability, the lower the fair value

- (g) The Group has carefully assessed the valuation models and assumptions used to measure fair value. However, use of different valuation models or assumptions may result in different measurement. The following is the effect of profit or loss or of other comprehensive income from financial assets categorized within Level 3 if the inputs used to valuation models have changed:

	Input	Change	December 31, 2018			
			Recognized in profit or loss		Recognized in other comprehensive income	
			Favorable change NT\$000	Unfavorable change NT\$000	Favorable change NT\$000	Unfavorable change NT\$000
Financial assets						
Foreign partnership interests	Discount rate	Note	—	—	—	—
Foreign unlisted stocks	Price to book ratio multiple	± 1%	—	—	69	68
	Enterprise to EBITDA multiple	± 1%	—	—	1,563	1,512
	Discount for lack of marketability	± 1%	—	—	2,093	2,050
			—	—	3,725	3,630

Note: Based on the Group's assessment, change in input would not have significant impact on profit or loss or other comprehensive income.

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36. Share-based payments

Restricted Shares

On November 12, 2014, the Board of Directors of the Company approved 2014 Restricted Stock Award Agreement which has 17,300 thousand restricted shares available for issuance. The par value and granting price of the restricted shares were NT\$10 and zero, respectively. The issuance of the restricted shares was approved by the Special General Meeting of the Shareholders of the Company on December 30, 2014 and approved by the Financial Supervisory Commission ROC on June 30, 2015.

On July 14, 2015 and April 18, 2016, the Board of Directors of the Company approved to set July 21, 2015 and May 10, 2016 as the Record Date of the issuance of 15,752 thousand and 1,548 thousand restricted shares.

When the employees of ChipMOS Taiwan accomplished the following years of service and performance conditions, the received restricted shares will be vested based on the vesting ratio.

	The 1st year	The 2nd year	The 3rd year
Years of service following the receipt of restricted shares	Continuous service for one year	Continuous service for two years	Continuous service for three years
Grade of performance appraisal	>=B+	>=B+	>=B+
Compliance of terms agreed by the staff and the Company	No violation	No violation	No violation
Vesting ratio of numbers of restricted shares received	30%	30%	40%

The restricted shares issued by the Company cannot be transferred during the vesting period, but voting right and dividend right are not restricted. Employees are required to return the shares but not required to return the dividends received if they resign during the vesting period. When the employees accomplish the years of service and performance conditions, the received restricted shares will be vested based on the vesting ratio.

During 2017 and 2018, the Group recognized NT\$123,021 thousand and NT\$41,043 thousand (US\$1,341 thousand), respectively, compensation expenses in respect of the transactions of share-based payments.

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37. Capital management

The Group manages its capital to ensure that entities in the Group will be able to continue as a going concern while maximizing the return to shareholders through the optimization of the balance between debt and equity.

The Group reviews the capital structure on an ongoing basis. As part of this review, the directors consider the cost of capital and the risks associated with each class of capital. The Group will balance its overall capital structure through the payment of dividends, new share issues and the issue of new debt or the repayment of existing debt.

The Group's overall strategy remains unchanged from 2017.

The Group monitors capital using the liabilities to assets ratio, the percentages of which as of December 31, 2017 and 2018 were as follows:

	<u>December 31, 2017</u>	<u>December 31, 2018</u>	<u>December 31, 2018</u>
	<u>NT\$000</u>	<u>NT\$000</u>	<u>US\$000</u>
Total liabilities	<u>15,138,993</u>	<u>15,112,545</u>	<u>493,713</u>
Total assets	<u>33,259,942</u>	<u>33,133,718</u>	<u>1,082,448</u>
Liabilities to assets ratio	<u>45.52%</u>	<u>45.61%</u>	<u>45.61%</u>

38. Significant events after the reporting periods

To further strengthen financial structure, increase balance of working capital and decrease debt ratio, the Company's Board of Directors adopted a resolution on April 2, 2019 to dispose of 9,100,000 common shares, or 9.1% of equity investment in the associate, JMC. The disposal of shares was completed on April 8, 2019, and the Company recognized gain on disposal of investment in associates amounted to NT\$973,609 thousand (US\$31,807 thousand). JMC is still recognized as "Investment in associates" given that the Company retains significant influence by holding two seats in JMC's Board of Directors.

39. Approval of the financial statements

These consolidated financial statements were approved and authorized for issue by the Board of Directors on April 25, 2019.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

40. Financial Statements Schedule: Valuation and Qualifying Accounts

	<u>January 1</u> NT\$000	<u>Additions</u> <u>charged to</u> <u>expense</u> NT\$000	<u>Deduction /</u> <u>Write-offs</u> NT\$000	<u>Exchange</u> <u>difference on</u> <u>translations</u> <u>of foreign</u> <u>financial</u> <u>statement</u> NT\$000	<u>Non-current</u> <u>assets held</u> <u>for sale</u> NT\$000	<u>December 31</u> NT\$000
Year of 2016 :						
Allowance for impairment of property, plant and equipment	1,994,715	8,198	(45,319)	(118,046)	(1,480,278)	359,270
Allowance for impairment of obsolescence and decline in market value of inventories	95,036	66,894	—	(557)	(6,532)	154,841
Allowance for impairment of accounts receivable	—	87	—	—	—	87
Year of 2017 :						
Allowance for impairment of property, plant and equipment	359,270	956	(39,771)	—	—	320,455
Allowance for impairment of obsolescence and decline in market value of inventories	154,841	—	(101,127)	—	—	53,714
Allowance for impairment of accounts receivable	87	—	(87)	—	—	—
Year of 2018 :						
Allowance for impairment of property, plant and equipment	320,455	—	(2,862)	—	—	317,593
Allowance for impairment of obsolescence and decline in market value of inventories	53,714	—	(17,557)	—	—	36,157
Loss allowance for accounts receivable*	1,819	322	—	—	—	2,141

* The Group initially applied IFRS 9 on January 1, 2018, and recorded loss allowance amounted to NT\$1,819 thousand based on expected credit loss. Please refer to Note 41 for the details of significant effects as of January 1, 2018 on applying the aforementioned new standard.

41. Effects on initial application of IFRS 9 and information for the years ended December 31, 2016 and 2017 in conformity with IAS 39

a) Summaries of adopting significant accounting policies for the years ended December 31, 2016 and 2017:

Investments and other financial assets

Initial recognition and measurement

The Group's financial assets are classified, at initial recognition, into financial assets at fair value through profit or loss ("FVTPL"), loans and receivables and available-for-sale financial investments. When financial assets are recognized initially, they are measured at fair value plus transaction costs that are attributable to the acquisition of the financial assets.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

41. Effects on initial application of IFRS 9 and information for the years ended December 31, 2016 and 2017 in conformity with IAS 39 (continued)

- a) Summaries of adopting significant accounting policies for the years ended December 31, 2016 and 2017 (continued):

Investments and other financial assets (continued)

Initial recognition and measurement (continued)

All regular way purchases or sales of financial assets are recognized on the settlement date, that is, the date that the Group completes the purchase or sell of the asset. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the marketplace.

Effective interest method

The effective interest method is a method of calculating the amortized cost of loans and receivables and a debt instrument and of allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts (including all fees on points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the debt instrument, or, where appropriate, a shorter period.

Income is recognized on an effective interest basis for debt instruments.

Subsequent measurement

The subsequent measurement of financial assets depends on their classification as follows:

Financial assets at fair value through profit or loss

Financial assets at FVTPL include financial assets held for trading and those designated as at FVTPL upon initial recognition.

A financial asset is classified as held for trading, mainly for cash management purpose as part of operating activities, if it has been acquired principally for the purpose of selling in the near future; or it is a part of an identified portfolio of financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or it is a derivative that is not designated and effective as a hedging instrument.

A financial asset other than a financial asset held for trading may be designated as at FVTPL upon initial recognition if:

- such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
- the financial asset forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on fair value basis, in accordance with the Group's documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or
- it forms part of a contract containing one or more embedded derivatives, and IAS 39 "Financial Instruments: Recognition and Measurement" permits the entire combined contract (asset or liability) to be designated as at FVTPL.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

41. Effects on initial application of IFRS 9 and information for the years ended December 31, 2016 and 2017 in conformity with IAS 39 (continued)

- a) Summaries of adopting significant accounting policies for the years ended December 31, 2016 and 2017 (continued):

Investments and other financial assets (continued)

Subsequent measurement (continued)

Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. At the end of each reporting period, subsequent to initial recognition, loans and receivables (including accounts and notes receivables, other receivables, refundable deposits, short-term deposits and cash and cash equivalents) are carried at amortized cost using the effective interest method, less any identified impairment losses.

Available-for-sale financial investments

Available-for-sale financial investments are non-derivative financial assets in unlisted equity investments. Equity investments classified as available for sale are those which are neither classified as held for trading nor designated as at fair value through profit or loss.

When the fair value of unlisted equity investments cannot be reliably measured because (a) the variability in the range of reasonable fair value estimates is significant for that investment or (b) the probabilities of the various estimates within the range cannot be reasonably assessed and used in estimating fair value, such investments are stated at cost less any impairment losses.

The Group evaluates whether the ability and intention to sell its available-for-sale financial investments in the near term are still appropriate. When, in rare circumstances, the Group is unable to trade these financial assets due to inactive markets, the Group may elect to reclassify these financial assets if management has the ability and intention to hold the assets for the foreseeable future or until maturity.

Impairment of financial assets

The Group assesses at the end of each reporting period whether there is objective evidence that a financial asset or a group of financial assets is impaired. An impairment exists if one or more events that occurred after the initial recognition of the asset have an impact on the estimated future cash flows of the financial asset or the group of financial assets that can be reliably estimated. Evidence of impairment may include indications that a debtor or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganization and observable data indicating that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

41. Effects on initial application of IFRS 9 and information for the years ended December 31, 2016 and 2017 in conformity with IAS 39 (continued)

- a) Summaries of adopting significant accounting policies for the years ended December 31, 2016 and 2017 (continued):

Impairment of financial assets (continued)

Financial assets carried at amortized cost

For financial assets carried at amortized cost, the Group first assesses whether impairment exists individually for financial assets that are individually significant, or collectively for financial assets that are not individually significant. If the Group determines that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, it includes the asset in a group of financial assets with similar credit risk characteristics and collectively assesses them for impairment. Assets that are individually assessed for impairment and for which an impairment loss is, or continues to be, recognized are not included in a collective assessment of impairment.

The amount of any impairment loss identified is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not yet been incurred). The present value of the estimated future cash flows is discounted at the financial asset's original effective interest rate (i.e., the effective interest rate computed at initial recognition). The carrying amount of the asset is reduced through the use of an allowance account and the loss is recognized in the consolidated statements of comprehensive income. Interest income continues to be accrued on the reduced carrying amount and is accrued using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss. Loans and receivables together with any associated allowance are written off when there is no realistic prospect of future recovery and all collateral has been realized or has been transferred to the Group.

If, in a subsequent period, the amount of the estimated impairment loss increases or decreases because of an event occurring after the impairment was recognized, the previously recognized impairment loss is increased or reduced by adjusting the allowance account. If a write-off is later recovered, the recovery is credited to other expenses in the consolidated statements of comprehensive income.

Available-for-sale financial assets

The amount of the impairment loss is measured as the difference between the asset's acquisition cost (less any principal repayment and amortization) and current fair value, less any impairment loss on that financial asset previously recognized in profit or loss, and is reclassified from "other comprehensive income" to "profit or loss". If, in a subsequent period, the fair value of an investment in a debt instrument increases, and the increase can be related objectively to an event occurring after the impairment loss was recognized, then such impairment loss is reversed through profit or loss. Impairment loss of an investment in an equity instrument recognized in profit or loss shall not be reversed through profit or loss. Impairment loss is recognized and reversed by adjusting the carrying amount of the asset directly.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

41. Effects on initial application of IFRS 9 and information for the years ended December 31, 2016 and 2017 in conformity with IAS 39 (continued)

- b) The Group initially applied IFRS 9 on January 1, 2018, and recorded loss allowance based on expected credit loss. The impact was contract assets decreased by NT\$115 thousand (US\$4 thousand), accounts receivable decreased by NT\$1,819 thousand (US\$59 thousand), other receivables decreased by NT\$5 thousand (US\$163), other receivables – related parties decreased by NT\$2 thousand (US\$65), retained earnings decreased by NT\$1,940 thousand (US\$63 thousand) and deferred tax assets increased by NT\$1 thousand (US\$33).
- c) The carrying amount of financial assets transferred from December 31, 2017 under IAS 39 to January 1, 2018 under IFRS 9 is reconciled as follows:

	Note	Measured at cost NT\$000	Measured at fair value through profit or loss NT\$000	Measured at fair value through other comprehensive income NT\$000	Other financial assets NT\$000	Measured at amortized cost NT\$000	Total NT\$000	Effects	
								Retained earnings NT\$000	Other equity interest NT\$000
IAS 39		20,890	—	—	70,241	—	91,131	—	—
Transferred into and measured at fair value through profit or loss	(c)	(10,940)	10,940	—	—	—	—	—	—
Transferred into and measured at fair value through other comprehensive income	(b)	(9,950)	—	9,950	—	—	—	—	—
Transfer into and measured at amortized cost	(a)	—	—	—	(70,241)	70,241	—	—	—
Fair value adjustment	(b)(c)	—	493	50,801	—	—	51,294	493	79,385
Impairment loss adjustment	(b)	—	—	28,584	—	—	28,584	28,584	(28,584)
Income tax adjustment	(b)	—	—	—	—	—	—	—	(8,636)
IFRS 9		—	11,433	89,335	—	70,241	171,009	29,077	42,165

- (a) The Group's restricted bank deposits that failed to meet the definition of cash and cash equivalents amounted to NT\$70,241 thousand (US\$2,295 thousand) were classified as "Other financial assets" under IAS 39. Since the assets' cash flows represent solely payments of principal and interest, the restricted bank deposits were reclassified as "Financial assets at amortized cost" amounted to NT\$70,241 thousand (US\$2,295 thousand) on initial application of IFRS 9.
- (b) Given the Group's available-for-sale financial assets amounted to NT\$9,950 thousand (US\$325 thousand) under IAS 39 were not held for the purpose of trading, it was elected to classify as "Financial assets at fair value through other comprehensive income" and increased by NT\$89,335 thousand (US\$2,918 thousand) on initial application of IFRS 9. Accompanying retained earnings, other equity interest and deferred tax liabilities were increased by NT\$28,584 thousand (US\$934 thousand), NT\$42,165 thousand (US\$1,377 thousand) and NT\$8,636 thousand (US\$282 thousand), respectively.
- (c) The Group's available-for-sale financial assets amounted to NT\$10,940 thousand (US\$357 thousand) under IAS 39 were classified as "Financial assets at fair value through profit or loss" and increased by NT\$11,433 thousand (US\$374 thousand) in compliance with IFRS 9. Accompanying retained earnings were increased by NT\$493 thousand (US\$16 thousand).

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

41. Effects on initial application of IFRS 9 and information for the years ended December 31, 2016 and 2017 in conformity with IAS 39 (continued)

d) The significant account as of December 31, 2017 is as follows:

Available-for-sale financial assets

	<u>December 31,</u> <u>2017</u>
	<u>NT\$000</u>
Unlisted equity investments, at cost	49,474
Less: Allowance for impairment losses	(28,584)
	<u>20,890</u>

Due to the operation loss and accumulated deficit of VIGOUR TECHNOLOGY Corporation (“VIGOUR”), the Company has recognized full impairment loss of its investments on VIGOUR amounted to NT\$41,336 thousand in prior years. Based on the Company’s assessment, considering VIGOUR is currently in liquidation process and no residual assets are expected to be available for distributions, the carrying amount of investments and accumulated impairment losses were reclassified to “Other receivables” in the fourth quarter of 2017.

As of December 31, 2017, no available-for-sale financial assets were pledged.

e) Credit risk information as of December 31, 2017 is as follows:

- (a) Credit risk is the risk that a counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Group is exposed to credit risk from its operating activities (primarily accounts and other receivables) and from its financing activities (primarily deposits with banks and financial instruments).
- (b) Each business unit performs ongoing credit evaluation of the debtors’ financial condition according to the Group’s established policy, procedures and control relating to customer credit risk management. The Group maintains an account for allowance for doubtful receivables based upon the available facts and circumstances, historical collection and write-off experiences of all trade and other receivables which consequently minimizes the Group’s exposure to bad debts.
- (c) Credit risk from balances with banks and financial institutions is managed by the Group’s finance unit in accordance with the Group’s policy. Bank balances are held with financial institutions of good standing. The Group’s exposure to credit risk arising from the default of counter-parties is limited to the carrying amount of these instruments.
- (d) The aging of accounts receivable which are past due but not impaired is as follows:

	<u>December 31,</u> <u>2017</u>
	<u>NT\$000</u>
£ 1 month	10,482
1-2 months	477
2-3 months	426
3-4 months	1,431
> 4 months	3,056
	<u>15,872</u>

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

41. Effects on initial application of IFRS 9 and information for the years ended December 31, 2016 and 2017 in conformity with IAS 39 (continued)

- (e) The movements in allowance for impairment of accounts and other receivables during the year is as follows:

	<u>Accounts receivable</u> NT\$000	<u>Other receivables</u> NT\$000
January 1, 2017	87	—
Reversal of allowance for impairment losses	(87)	—
December 31, 2017	<u>—</u>	<u>—</u>

Receivables that were neither past due nor impaired relate to a large number of diversified customers for whom there was no recent history of default.

Receivables that were past due but not impaired relate to a number of independent customers that have a good track record with the Group. Based on past experience, the management of the Company are of the opinion that no provision for impairment is necessary in respect of these balances as there has not been a significant change in credit quality and the balances are still considered fully recoverable.

The individually impaired receivables related to customers that were in financial difficulties or other factors, e.g. the customers were in default or delinquency in interest or principal payments and only a portion of the receivables is expected to be recovered.

The Group's accounts receivable that were neither past due nor impaired were fully performed in line with the credit standards prescribed based on counterparties' industrial characteristics, scale of business and profitability.

- (f) As of December 31, 2017, no accounts and notes and other receivables were pledged.

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

42. Effects on initial application of IFRS 15 and information for the years ended December 31, 2016 and 2017 in conformity with IAS 18

- a) The significant accounting policies applied on revenue recognition for the years ended December 31, 2016 and 2017 are set out below:

Revenue recognition

Revenue is recognized to the extent that it is probable that the economic benefits arising in the course of business will flow to the Group and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the fair value of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duty.

The Group engaged in the research, development, manufacturing and sale of high-integration and high-precision integrated circuits and related assembly and testing services. The criteria that the Group uses to determine when to recognize revenue are: (a) the Group has transferred to the buyer the significant risks and rewards of ownership of the goods; (b) the Group retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold; (c) the amount of revenue can be measured reliably; (d) it is probable that the economic benefits associated with the transaction will flow to the Group ; (e) the stage of completion of the transaction at the end of the reporting period can be measured reliably, and (f) the costs incurred for the transaction and the costs to complete the transaction can be measured reliably.

The Group does not take ownership of: (1) bare semiconductor wafers received from customers that are assembled into finished semiconductors, and (2) assembled semiconductors received from the customers that it tests. The title and risk of loss remains with the customer for those bare semiconductors and/or assembled semiconductors. Accordingly, the customer-supplied semiconductor materials are not included in the consolidated financial statements.

The Group does not provide warranties to customers except in cases of defects in the assembly services provided and deficiencies in testing services provided. An appropriate sales allowance is recognized in the period during which the sale is recognized, and is estimated based on historical experience.

- b) The revenue recognized by using above accounting policies for the year ended December 31, 2017 are provided in Note 4.
- c) The impact and description on consolidated statement of financial position and statement of comprehensive income if the Group continues adopting above accounting policies as of and for the year ended December 31, 2018 are as follows:

<u>Consolidated statement of financial position items</u>	<u>Description</u>	<u>December 31, 2018</u>		
		<u>Balance under IFRS 15</u> NT\$000	<u>Balance under previous accounting policies</u> NT\$000	<u>Impact on accounting policy change</u> NT\$000
Contract assets	(d)(f)(g)	299,835	—	299,835
Inventories	(e)	1,778,835	2,016,106	(237,271)
Deferred tax assets	(h)	226,716	226,635	81
Contract liabilities	(i)	1,432	—	1,432
Receipts in advance	(i)	1,013	2,445	(1,432)
Current provisions	(j)	29,352	61,979	(32,627)
Current refund liabilities	(j)	32,627	—	32,627
Retained earnings		3,602,663	3,540,018	62,645

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

42. Effects on initial application of IFRS 15 and information for the years ended December 31, 2016 and 2017 in conformity with IAS 18 (continued)

Consolidated statement of comprehensive income items	Description	2018		
		Balance under IFRS 15 NT\$000	Balance under previous accounting policies NT\$000	Impact on accounting policy change NT\$000
Revenue	(a)(d)	18,480,027	18,434,763	45,264
Cost of revenue	(a)(e)	(15,050,032)	(15,021,266)	(28,766)
Operating expenses	(f)	(1,477,788)	(1,477,653)	(135)
Other non-operating income (expenses), net	(g)	173,070	173,476	(406)
Income tax expense	(c)(h)	(456,618)	(465,392)	8,774
Profit for the year		1,325,824	1,301,093	24,731
Earnings per share (in dollars)				
Basic		NT\$ 1.65	NT\$ 1.62	NT\$ 0.03
Diluted		NT\$ 1.63	NT\$ 1.60	NT\$ 0.03

Explanation on the adjustments:

Impact on January 1, 2018

(a) Revenue recognition of customized products

The Group provides high-integration and high-precision integrated circuits and related assembly and testing services based on the specifications as required by the customers. The revenue is recognized when the significant risks and rewards are transferred to customers under previous accounting policies, and the timing of recognition usually occurred upon service completion. Under IFRS 15, considering that the Group provides assembly and testing service to create or enhance a highly customized product and the customer controls the asset as it is created or enhanced, the revenue will be recognized based on the progress towards completion. As a result, retained earnings increased by NT\$46,607 thousand (US\$1,523 thousand), inventories decreased by NT\$208,505 thousand (US\$6,812 thousand) and contract assets increased by NT\$255,112 thousand (US\$8,334 thousand).

(b) Presentation of refund liabilities

By adopting IFRS 15, the Group's provision for sales allowance amounted to NT\$70,156 thousand (US\$2,292 thousand) is presented as current refund liabilities from January 1, 2018, which was previously presented as current provisions.

(c) Recognition of deferred tax

When initially adopting IFRS 15, the Group recognized adjustments in the statement of financial position which resulted to temporary differences. Accordingly, as of January 1, 2018, deferred tax assets decreased by NT\$626 thousand (US\$20 thousand), deferred tax liabilities increased by NT\$8,067 thousand (US\$264 thousand) and retained earnings decreased by NT\$8,693 thousand (US\$284 thousand).

ChipMOS TECHNOLOGIES INC. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements (Continued)
December 31, 2016, 2017 and 2018

42. Effects on initial application of IFRS 15 and information for the years ended December 31, 2016 and 2017 in conformity with IAS 18 (continued)

Explanation on the adjustments (continued):

Impact on December 31, 2018

(d) Contract assets and revenue recognition

Under IFRS 15, the Group provides assembly and testing service to create or enhance a highly customized product and the customer controls the asset as it is created or enhanced, the revenue will be recognized based on the progress towards completion. As a result, contract assets and revenue increased by NT\$300,376 thousand (US\$9,813 thousand) as of December 31, 2018.

(e) Transfer inventory to cost of revenue

Under IFRS 15, when revenue is recognized based on the progress towards completion, work in process and finished goods in ending inventories should be transferred to cost of revenue at the end of the reporting period. As a result, inventories decreased and cost of revenue increased by NT\$237,271 thousand (US\$7,751 thousand) as of December 31, 2018.

(f) Expected credit loss recognition

Under IFRS 15, when contract assets and revenue are recognized based on the progress towards completion, loss allowance is recognized based on the expected credit loss model. As a result, expected credit loss increased and contract assets decreased by NT\$135 thousand (US\$4 thousand) for the year ended December 31, 2018.

(g) Foreign exchange

Under IFRS 15, when contract assets and revenue are recognized based on the progress towards completion, foreign exchange loss is also recognized using the exchange rates prevailing at the statement of financial position date. As a result, foreign exchange loss increased and contract assets decreased by NT\$406 thousand (US\$13 thousand) for the year ended December 31, 2018.

(h) Recognition of deferred tax

In summary, foreign exchange loss recognized would result to a temporary difference. Accordingly, deferred tax assets increased and income tax expense decreased by NT\$81 thousand (US\$3 thousand) for the year ended December 31, 2018.

(i) Presentation of contract liabilities

By adopting IFRS 15, advance payments amounted to NT\$1,432 thousand (US\$47 thousand) in certain assembly and testing service contracts were presented as contract liabilities as of December 31, 2018, which were previously presented as receipts in advance.

(j) Presentation of refund liabilities

By adopting IFRS 15, the Group's provision for sales allowance amounted to NT\$32,627 thousand (US\$1,066 thousand) was presented as current refund liabilities as of December 31, 2018, which was previously presented as current provisions.

(Translation, for reference only)

ChipMOS TECHNOLOGIES (Shanghai) LTD.
The Supplemental Agreement for AGREEMENT FOR
SINO-FOREIGN EQUITY JOINT VENTURE

ChipMOS TECHNOLOGIES (Shanghai) LTD.

**The Supplemental Agreement for
AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE**

WHEREAS, Tibet Unigroup GuoWei Investment Co., Ltd., ChipMOS TECHNOLOGIES (BVI) LTD., Gongqingcheng Changhou Investment Management Ltd. ("**Changhou Capital**"), Accretech (China) Co Ltd., Chao-Jung Tsai, Shih-Jye Cheng, Shanghai Zuzhu Business Consulting Partnership (Limited Partnership), Shou-Kang Chen, and David W. Wang made and executed the "AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE" (hereinafter referred to as "**JV Agreement**") on November 30, 2016 for the matter of joint venture of ChipMOS TECHNOLOGIES (Shanghai) LTD. ("**ChipMOS Shanghai**");

WHEREAS, Changhou Capital has entered into the "Equity Interest Transfer Agreement" with its Related Party, Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership) ("**Hong Xin Capital**"), transferring of all of its equity interests in ChipMOS Shanghai to Hong Xin Capital (the registered capital in the amount of RMB49,376,805), and Changhou Capital has presented its "Letter of Declaration and Undertaking" in accordance with the JV Agreement (as Attachment 1);

WHEREAS, Hong Xin Capital fully understands the contents of the JV Agreement and agrees to assume Changhou Capital's rights and obligations under the JV Agreement;

NOW, THEREFORE, in consideration of the mutual premises contained herein, the Tibet Unigroup GuoWei Investment Co., Ltd., ChipMOS TECHNOLOGIES (BVI) LTD., Accretech (China) Co Ltd., Chao-Jung Tsai, Shih-Jye Cheng, Shanghai Zuzhu Business Consulting Partnership (Limited Partnership), Shou-Kang Chen, David W. Wang, and Hong Xin Capital hereto agree to this supplemental agreement for the JV Agreement ("**this Agreement**") through good faith negotiations on April 10, 2017 as follows:

Article 1. The Transfer of Rights and Obligations under the JV Agreement

- 1.1 Hong Xin Capital, a limited partnership duly organized and existing under the laws of the People's Republic of China, with its registered office at 406-58 Gongqingcheng, Private Equity Park, Jiujiang City, Jiangxi Province. Its legal representative on the execution date of this Agreement being Changhou Capital (representative: Hong-Wei Hsieh).

- 1.2 The Parties to this Agreement agree that from the execution date of this Agreement, Changhou Capital's rights and obligations under the JV Agreement will be transferred to Hong Xin Capital. Hong Xin Capital shall enjoy the benefits of Changhou Capital under the JV Agreement and perform Changhou Capital's corresponding obligations under the JV Agreement as if Hong Xin Capital is the original party of the JV Agreement. Changhou Capital and Hong Xin Capital shall be jointly and severally liable for the performance of the obligations under the JV Agreement.
- 1.3 For receiving notices under the JV Agreement, the contact information of Hong Xin is as follows:
Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership)
Address: Floor 12, Taisite Building, No. 31, Sanhuan Middle Road, Haidian District, Beijing City
Attention: Hong-Wei Hsieh
Email: olucko@126.com

Article 2. Shanghai Zuzhu Changed Its Managing Partner

- 2.1 The Managing Partner of Shanghai Zuzhu has been changed from Yu-Hua Zhu to ChipMOS TECHNOLOGIES (BVI) LTD. (Representative: Lien-Fa Chou) (Incorporated in British Virgin Islands)
- 2.2 For receiving notices under Section 20.8.1 of the JV Agreement, the contact information of Shanghai Zuzhu is changed as follows:
Shanghai Zuzhu Business Consulting Partnership (Limited Partnership)
Address: Room 170, Area 0, Floor 1, Building 2, No.1218, Xinda Road, Qingpu District, Shanghai
Attention: Lien-Fa Chou
Email: lafair_cho@chipmos.com

Article 3. Miscellaneous

- 3.1 Terms that are not defined, however used in this Agreement, shall have the same meaning as those given in the JV Agreement.
- 3.2 In the event that this Agreement is inconsistent with the JV Agreement, this Agreement shall prevail. Matters that are not specified in this Agreement shall be addressed in accordance with the JV Agreement.
- 3.3 This Agreement may be modified or amended only by a written and signed agreement of the Parties. No waiver by any Party of one or more rights under this Agreement shall be recognized as a waiver of any other right hereunder, nor shall such waiver be regarded as a waiver of the same right in any other circumstances.
- 3.4 In case of a disputed provision, the remaining provisions of this Agreement shall remain in full force and effect during the dispute. If any provision of this Agreement is deemed unenforceable or invalid, the remaining provisions of this Agreement shall remain in full force and effect.
- 3.5 This Agreement shall become effective upon being signed and chopped by the Parties.
- 3.6 This Agreement can be executed in as many originals as needed, while each original shall have the same legal effect, and each Party shall retain no less than one (1) original.

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[Signature Pages]

IN WITNESS WHEREOF, the Parties hereto have duly executed this Agreement on the day and year set forth in recital above.

ChipMOS TECHNOLOGIES (BVI) LTD.
(Seal)

Signature: _____
Name: Lien-Fa Chou
Title: Chairman

[Signature Pages]

IN WITNESS WHEREOF, the Parties hereto have duly executed this Agreement on the day and year set forth in recital above.

Accretech (China) Co Ltd.
(Seal)

Signature: _____
Name: Hao Chen
Title: Director / General Manager

[Signature Pages]

IN WITNESS WHEREOF, the Parties hereto have duly executed this Agreement on the day and year set forth in recital above.

Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership)
(Seal)

Signature: _____

Name: Hong-Wei Hsieh

Title: Representative of the Managing Partner

[Signature Pages]

IN WITNESS WHEREOF, the Parties hereto have duly executed this Agreement on the day and year set forth in recital above.

Tibet Unigroup GuoWei Investment Co., Ltd. (Seal)

Signature: _____

Name: Wei-Guo Zhao

Title: Executive Director

[Signature Pages]

IN WITNESS WHEREOF, the Parties hereto have duly executed this Agreement on the day and year set forth in recital above.

Chao-Jung Tsai

Signature: _____

[Signature Pages]

IN WITNESS WHEREOF, the Parties hereto have duly executed this Agreement on the day and year set forth in recital above.

Shih-Jye Cheng

Signature: _____

[Signature Pages]

IN WITNESS WHEREOF, the Parties hereto have duly executed this Agreement on the day and year set forth in recital above.

Shou-Kang Chen

Signature: _____

[Signature Pages]

IN WITNESS WHEREOF, the Parties hereto have duly executed this Agreement on the day and year set forth in recital above.

David W. Wang

Signature: _____

[Signature Pages]

IN WITNESS WHEREOF, the Parties hereto have duly executed this Agreement on the day and year set forth in recital above.

Shanghai Zuzhu Business Consulting Partnership (Limited Partnership)
(Seal)

Signature: _____

Name: Lien-Fa Chou

Title: Representative of the Managing Partner

(Translation, for reference only)

ChipMOS TECHNOLOGIES (Shanghai) LTD.
The 2nd Supplemental Agreement for
AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE

ChipMOS TECHNOLOGIES (Shanghai) LTD.

**The 2nd Supplemental Agreement for
AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE**

WHEREAS, Tibet Unigroup GuoWei Investment Co., Ltd., ChipMOS TECHNOLOGIES (BVI) LTD., Gongqingcheng Changhou Investment Management Ltd., Accretech (China) Co., Ltd., Chao-Jung Tsai, Shih-Jye Cheng, Shanghai Zuzhu Business Consulting Partnership (Limited Partnership), Shou-Kang Chen, David W.Wang, and Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership) ("**Hong Xin Capital**") made and executed the "AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE" and the supplemental agreements thereof (hereinafter collectively referred to as "**JV Agreement**") respectively on November 30, 2016 and April 10, 2017 for the matter of the joint venture of ChipMOS TECHNOLOGIES (Shanghai) LTD. ("**ChipMOS Shanghai**" or the "**Company**");

WHEREAS, the Parties have partially remitted their capital contribution to the Company's account in accordance with the JV Agreement;

WHEREAS, the Parties wish to extend the time period for remittance of the newly increased amount of registered capital contribution to the Company.

NOW, THEREFORE, in consideration of the mutual premises contained herein, the Parties hereto agree to this supplemental agreement for the JV Agreement ("**this Agreement**") through good faith negotiations on November 28, 2017 as follows:

Article 1.

Section 5.3 of the JV Agreement ("Capital Contribution of the Parties and Shareholding Percentage") shall be amended as:

The capital contribution and shareholding percentage for the registered capital of the Company by each Party are as follows (amounts in RMB):

ChipMOS TECHNOLOGIES (Shanghai) LTD.
The 2nd Supplemental Agreement for
AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE

Shareholder	Total Capital Contribution	The Amount of Capital from Transfer of Equity Interests	The Amount of Capital Already Remitted	The Amount of Capital Remaining to be Remitted	Shareholding Percentage
Investor A	1,185,044,913	669,516,900	329,937,928	185,590,085	48.0000%
ChipMOS BVI	1,111,576,624	628,009,392	309,483,028	174,084,204	45.0242%
Hong Xin Capital	49,376,805	27,896,500	13,747,395	7,732,910	2.0000%
Accretech	34,964,934	19,754,200	9,734,870	5,475,864	1.4162%
Chao-Jung Tsai	33,187,500	18,750,000	9,240,000	5,197,500	1.3443%
Shih-Jye Cheng	27,656,250	15,625,000	7,713,225	4,318,025	1.1202%
Shanghai Zuzhu	23,208,948	13,112,400	6,461,791	3,634,757	0.9401%
Shou-Kang Chen	3,062,100	1,730,000	852,544	479,556	0.1240%
David W.Wang	765,525	432,500	213,136	119,889	0.0310%

In the event that one Party contributes capital by foreign currency, the exchange rate applicable to the capital contribution shall be the central exchange rate as announced by the People's Bank of China on the date of its capital contribution (Medial Rate).

Article 2.

Section 5.4.2 of the JV Agreement shall be amended as:

The Parties agree that: prior to June 30, 2018, after the resolution of the Board, the Parties shall, within thirty (30) days of such resolution, remit the funds to be contributed by the Parties in accordance with Section 5.3 to the Company's account. If any Party fails to remit its capital contribution in accordance with the provisions of this Agreement, such Party shall be obliged to pay interest on the unremitted portion to the Company in the form of a simple interest payment for the period from the due date for remittance to the date of actual remittance, while the interest rate shall be 2% plus the one-year Renminbi loan interest rate to be implemented by the People's Bank of China. Other Parties who comply with this Agreement have the right to seek compensation from the defaulting Party to the extent permitted by Laws (including, in particular, a total amount equivalent to 20% of the defaulting Party's unremitted capital contribution to the Company's registered capital). Nothing in this Section 5.4.2 shall prejudice any other right of the non-defaulting Party under this Agreement or the applicable Laws.

Article 3. Miscellaneous

- 3.1 Terms that are not defined, however used in this Agreement, shall have the same meaning as those given in the JV Agreement.
- 3.2 In the event that this Agreement is inconsistent with the JV Agreement, this Agreement shall prevail. Matters that are not specified in this Agreement shall be addressed in accordance with the JV Agreement.
- 3.3 This Agreement may be modified or amended only by a written and signed agreement of the Parties. No waiver by any Party of one or more rights under this Agreement shall be recognized as a waiver of any other right hereunder, nor shall such waiver be regarded as a waiver of the same right in any other circumstances.
- 3.4 In case of a disputed provision, the remaining provisions of this Agreement shall remain in full force and effect during the dispute. If any provision of this Agreement is deemed unenforceable or invalid, the remaining provisions of this Agreement shall remain in full force and effect.
- 3.5 This Agreement shall become effective upon being signed and chopped by the Parties.
- 3.6 This Agreement can be executed in as many originals as needed, while each original shall have the same legal effect, and each Party shall retain no less than one (1) original.

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[Signature Pages]

Tibet Unigroup GuoWei Investment Co., Ltd. (Seal)

Signature: _____
Name: Wei-Guo Zhao
Title: Executive Director

[Signature Pages]

ChipMOS TECHNOLOGIES (BVI) LTD.
(Seal)

Signature: _____

Name: Lien-Fa Chou

Title: Chairman

[Signature Pages]

Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership)
(Seal)

Signature: _____

Name: Hong-Wei Hsieh

Title: Representative of the Managing Partner

[Signature Pages]

Accretech (China) Co., Ltd.
(Seal)

Signature: _____

Name: Hao Chen

Title: Director / General Manager

[Signature Pages]

Chao-Jung Tsai

Signature: _____

[Signature Pages]

Shih-Jye Cheng

Signature: _____

[Signature Pages]

Shanghai Zuzhu Business Consulting Partnership (Limited Partnership)
(Seal)

Signature: _____

Name: Lien-Fa Chou

Title: Representative of the Managing Partner

[Signature Pages]

Shou-Kang Chen

Signature: _____

[Signature Pages]

David W. Wang

Signature: _____

(Translation, for reference only)

Unimos Microelectronics (Shanghai) Co., Ltd.
The 3rd Supplemental Agreement for
AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE

Unimos Microelectronics (Shanghai) Co., Ltd.

**The 3rd Supplemental Agreement for
AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE**

WHEREAS, Tibet Unigroup GuoWei Investment Co., Ltd., ChipMOS TECHNOLOGIES (BVI) LTD., Gongqingcheng Changhou Investment Management Ltd., Accretech (China) Co., Ltd., Chao-Jung Tsai, Shih-Jye Cheng, Shanghai Zuzhu Business Consulting Partnership (Limited Partnership), Shou-Kang Chen, David W. Wang, and Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership) made and executed the “AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE” and the supplemental agreements thereof (hereinafter collectively referred to as “**JV Agreement**”) respectively on November 30, 2016, April 10, 2017 and November 28, 2017 for the matter of joint venture of ChipMOS TECHNOLOGIES (Shanghai) LTD. (“**ChipMOS Shanghai**”);

WHEREAS, the company name has been changed to Unimos Microelectronics (Shanghai) Co., Ltd.

WHEREAS, the company’s business scope was also amended.

NOW, THEREFORE, in consideration of the mutual premises contained herein, the Parties hereto agree to this supplemental agreement for the JV Agreement (“**this Agreement**”) through good faith negotiations on August 1, 2018 as follows:

Article 1.

“Company” under Section 1.1 of the JV Agreement shall be amended as:

“Company” means Unimos Microelectronics (Shanghai) Co., Ltd.

Article 2.

Section 3.1.1 of the JV Agreement shall be amended as:

The Chinese name of the Company is “上海宇微电子有限公司” and its English name is “Unimos Microelectronics (Shanghai) Co., Ltd.”

Article 3.

“Business Scope” under Section 4.2 of the JV Agreement shall be amended as:

The business scope of the Company is as follows: assembly and testing services for semiconductors (silicon and compound semiconductor) and integrated circuits (including sub-systems and modules), technology development, technical services, and sales of the products manufactured by the Company, including advanced assembly and testing such as MEMS and compound semiconductor integrated circuit manufacturing, BGA, CSP, etc. (operations and activities subject to any approval according to the Laws may not be carried out unless such approval is issued by the competent authority).

Article 4. Miscellaneous

- 4.1 Terms that are not defined, however used in this Agreement, shall have the same meaning as those given in the JV Agreement.
- 4.2 In the event that this Agreement is inconsistent with the JV Agreement, this Agreement shall prevail. Matters that are not specified in this Agreement shall be addressed in accordance with the JV Agreement.
- 4.3 This Agreement may be modified or amended only by a written and signed agreement of the Parties. No waiver by any Party of one or more rights under this Agreement shall be recognized as a waiver of any other right hereunder, nor shall such waiver be regarded as a waiver of the same right in any other circumstances.
- 4.4 In case of a disputed provision, the remaining provisions of this Agreement shall remain in full force and effect during the dispute. If any provision of this Agreement is deemed unenforceable or invalid, the remaining provisions of this Agreement shall remain in full force and effect.
- 4.5 This Agreement shall become effective upon being signed and chopped by the Parties.
- 4.6 This Agreement can be executed in as many originals as needed, while each original shall have the same legal effect, and each Party shall retain no less than one (1) original.

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[Signature Pages]

Tibet Unigroup GuoWei Investment Co., Ltd.
(Seal)

Signature: _____

Name: Wei-Guo Zhao

Title: Executive Director

[Signature Pages]

ChipMOS TECHNOLOGIES (BVI) LTD.
(Seal)

Signature: _____

Name: Lien-Fa Chou

Title: Chairman

[Signature Pages]

Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership).
(Seal)

Signature: _____

Name: Hong-Wei Hsieh

Title: Representative of the Managing Partner

[Signature Pages]

Accretech (China) Co., Ltd.
(Seal)

Signature: _____

Name: Hao Chen

Title: Director / General Manager

[Signature Pages]

Chao-Jung Tsai

Signature: _____

[Signature Pages]

Shih-Jye Cheng

Signature: _____

[Signature Pages]

Shanghai Zuzhu Business Consulting Partnership (Limited Partnership)
(Seal)

Signature: _____

Name: Lien-Fa Chou

Title: Representative of the Managing Partner

[Signature Pages]

Shou-Kang Chen

Signature: _____

[Signature Pages]

David W. Wang

Signature: _____

(Translation, for reference only)

Unimos Microelectronics (Shanghai) Co., Ltd.
The 4th Supplemental Agreement for
AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE

Unimos Microelectronics (Shanghai) Co., Ltd.

**The 4th Supplemental Agreement for
AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE**

WHEREAS, Tibet Unigroup Guowei Investment Co., Ltd., ChipMOS TECHNOLOGIES (BVI) LTD., Accretech (China) Co., Ltd., Chao-Jung Tsai, Shih-Jye Cheng, Shanghai Zuzhu Business Consulting Partnership (Limited Partnership), Shou-Kang Chen, David W. Wang, and Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership) made and executed the “AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE” and the supplemental agreements thereof (hereinafter collectively referred to as “**JV Agreement**”) respectively on November 30, 2016, April 10, 2017, November 28, 2017, and August 1, 2018, for the matter of joint venture of Unimos Microelectronics (Shanghai) Co., Ltd. (“**Unimos Shanghai**” or the “**Company**”);

WHEREAS, the business scope of the Company was amended.

WHEREAS, on December 22, 2018, the initial shareholder of the Company, Tibet Unigroup Guowei Investment Co., Ltd., executed an “**Equity Interest Transfer Agreement**” with Beijing Unis Memory Technology Co., Ltd., and transferred all the Equity Interests of the Company it held thereto accordingly.

NOW, THEREFORE, in consideration of the mutual premises contained herein, the Parties hereto agree to this supplemental agreement for the JV Agreement (“**this Agreement**”) through good faith negotiations on December 29, 2018 as follows:

Article 1.

Business Scope under Section 4.2 of the JV Agreement shall be amended as:

The business scope of the Company is as follows: assembly and testing services for semiconductors (silicon and compound semiconductor) and integrated circuits (including sub-systems and modules), technology development, technical services, and sales of the products manufactured by the Company including advanced assembly and testing such as MEMS, and compound semiconductor integrated circuits manufacturing, BGA, CSP, MCM, etc. (operations and activities subject to any approval according to the Laws may not be carried out unless such approval is issued by the competent authority).

Article 2.

Beijing Unis Memory Technology Co., Ltd. (Unified Social Credit Code: 91110108MA00GRNJK4, Registered Capital: RMB500 million, Legal Representative: Dao-Jie Ma, Registered Office: Room 2916, Floor 29, Zhizhen Building B, No. 7, Zhichun Road, Haidian District, Beijing City) joins the JV Agreement as a Party, substituting Tibet Unigroup Guowei Investment Co., Ltd. as shareholder of the Company, and it shall obtain and assume all the rights and duties related to Tibet Unigroup Guowei Investment Co., Ltd. in the JV Agreement. Tibet Unigroup Guowei Investment Co., Ltd. withdraws from the JV Agreement, and is no longer a Party of the JV Agreement.

Article 3. Miscellaneous

- 3.1 Terms that are not defined, however used in this Agreement, shall have the same meaning as those given in the JV Agreement.
- 3.2 In the event that this Agreement is inconsistent with the JV Agreement, this Agreement shall prevail. Matters that are not specified in this Agreement shall be addressed in accordance with the JV Agreement.
- 3.3 This Agreement may be modified or amended only by a written and signed agreement of the Parties. No waiver by any Party of one or more rights under this Agreement shall be recognized as a waiver of any other right hereunder, nor shall such waiver be regarded as a waiver of the same right in any other circumstances.
- 3.4 In case of a disputed provision, the remaining provisions of this Agreement shall remain in full force and effect during the dispute. If any provision of this Agreement is deemed unenforceable or invalid, the remaining provisions of this Agreement shall remain in full force and effect.
- 3.5 This Agreement shall become effective upon being signed and chopped by the Parties.
- 3.6 This Agreement can be executed in as many originals as needed, while each original shall have the same legal effect, and each Party shall retain no less than one (1) original.

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[Signature Pages]

Beijing Unis Memory Technology Co., Ltd. (Seal)

Signature: _____

Name: Dao-Jie Ma

Title: Legal Representative

Date: _____, 2018

[Signature Pages]

ChipMOS TECHNOLOGIES (BVI) LTD. (Seal)

Signature: _____
Name: Lien-Fa Chou
Title: Chairman

Date: _____, 2018

[Signature Pages]

Accretech (China) Co., Ltd. (Seal)

Signature: _____
Name: Hao Chen
Title: Director/ General Manager

Date: _____, 2018

[Signature Pages]

Chao-Jung Tsai

Signature: _____

Date: _____, 2018

[Signature Pages]

Shih-Jye Cheng

Signature: _____

Date: _____, 2018

[Signature Pages]

Shanghai Zuzhu Business Consulting Partnership (Limited Partnership) (Seal)

Signature: _____

Name: Lien-Fa Chou

Title: Representative of the Managing Partner

Date: _____, 2018

[Signature Pages]

Shou-Kang Chen

Signature: _____

Date: _____, 2018

[Signature Pages]

David W. Wang

Signature: _____

Date: _____, 2018

[Signature Pages]

Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership) (Seal)

Signature: _____

Name: Hong-Wei Hsieh

Title: Representative of the Managing Partner

Date: _____, 2018

(Translation, for reference only)

Unimos Microelectronics (Shanghai) Co., Ltd.
The 5th Supplemental Agreement for
AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE

Unimos Microelectronics (Shanghai) Co., Ltd.

**The 5th Supplemental Agreement for
AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE**

WHEREAS, Tibet Unigroup Guowei Investment Co., Ltd., ChipMOS TECHNOLOGIES (BVI) LTD., Accretech (China) Co., Ltd., Chao-Jung Tsai, Shih-Jye Cheng, Shanghai Zuzhu Business Consulting Partnership (Limited Partnership), Shou-Kang Chen, David W. Wang, and Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership) made and executed the “AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE” and the supplemental agreements thereof (hereinafter collectively referred to as “**JV Agreement**”) respectively on November 30, 2016, April 10, 2017, November 28, 2017, August 1, 2018 and December 29, 2018, for the matter of joint venture of Unimos Microelectronics (Shanghai) Co., Ltd. (“**Unimos Shanghai**” or the “**Company**”);

WHEREAS, on January 18, 2019, the initial shareholder of the Company, Gongqingcheng Changhou Hong Xin Investment Management Partnership (Limited Partnership), signed an “Equity Interest Transfer Agreement” with Beijing Unis Memory Technology Co., Ltd., and transferred all the equity of the Company it held thereto accordingly.

NOW, THEREFORE, in consideration of the mutual premises contained herein, the Parties hereto agree to this supplemental agreement for the JV Agreement (“**this Agreement**”) through good faith negotiations on February 1, 2019 as follows:

Article 1.

Section 2.3 of the JV Agreement (Investor C) shall be amended as:

2.3.1. Accretech (China) Co., Ltd. (“**Accretech**”), a limited company duly organized and existing under laws of the People’s Republic of China, with its registered office at Underground Floor, No. 118, Fu Te North Road, China (Shanghai) Pilot Free Trade Zone, and its legal representative on the execution date of the Articles of Incorporation being:

Name: Yoshida Hitoshi
Title: Chairman
Nationality: Japan

Unimos Microelectronics (Shanghai) Co., Ltd.
The 5th Supplemental Agreement for
AGREEMENT FOR SINO-FOREIGN EQUITY JOINT VENTURE

- 2.3.2. Chao-Jung Tsai, a citizen of Taiwan region, and whose Taiwan ID number is _____, and whose residence is at 11F., No. 601, Mingshui Rd., Zhongshan Dist., Taipei City;
- 2.3.3. Shih-Jye Cheng, a citizen of Taiwan region, and whose Taiwan ID number is _____, and whose residence is at No. 27-16, Aly. 10, Ln. 81, Guanghua 2nd St., Hsinchu City;
- 2.3.4. Shanghai Zuzhu Business Consulting Partnership (Limited Partnership) (“**Shanghai Zuzhu**”), a limited partnership duly organized and existing under laws of the People’s Republic of China, with its registered office at Room 170, Area 0, Floor 1, Building 2, No. 1218, Xinda Road, Qingpu District, Shanghai, and its legal representative on the execution date of the Articles of Incorporation being:
Name: ChipMOS TECHNOLOGIES (BVI) LTD. (Representative: Lien-Fa Chou)
Title: Managing Partner
Nationality: British Virgin Islands
- 2.3.5. Shou-Kang Chen, a citizen of Taiwan region, and whose Taiwan ID number is _____, and whose residence is at No. 2, Ln. 188, Yuping Rd., Neighborhood 13, Wensheng Vil., East Dist., Tainan City; and
- 2.3.6. David W. Wang, a citizen of Taiwan region, and whose Taiwan ID number is _____, and whose residence is at 9F.-1, No. 6, Dashun 3rd Rd., Xinshi Dist., Tainan City.

Article 2.

Provided that the capital contribution is completed, Section 5.3 of the JV Agreement shall be amended as:

Capital Contribution of the Parties and Shareholding Percentage

The capital contribution and shareholding percentage for the registered capital of the Company by each Party are as follows (amounts in RMB):

<u>Shareholder</u>	<u>Total Capital Contribution</u>	<u>Shareholding Percentage</u>
Investor A	1,234,421,718	50.0000%
ChipMOS BVI	1,111,576,624	45.0242%
Accretech	34,964,934	1.4162%
Chao-Jung Tsai	33,187,500	1.3443%
Shih-Jye Cheng	27,656,250	1.1202%
Shanghai Zuzhu	23,208,948	0.9401%
Shou-Kang Chen	3,062,100	0.1240%
David W. Wang	765,525	0.0310%

In the event that one Party contributes capital by foreign currency, the exchange rate applicable to the capital contribution shall be the central exchange rate as announced by the People's Bank of China on the date of its capital contribution (Medial Rate).

Article 3. Miscellaneous

- 3.1 Terms that are not defined, however used in this Agreement, shall have the same meaning as those given in the JV Agreement.
- 3.2 In the event that this Agreement is inconsistent with the JV Agreement, this Agreement shall prevail. Matters that are not specified in this Agreement shall be addressed in accordance with the JV Agreement.
- 3.3 This Agreement may be modified or amended only by a written and signed agreement of the Parties. No waiver by any Party of one or more rights under this Agreement shall be recognized as a waiver of any other right hereunder, nor shall such waiver be regarded as a waiver of the same right in any other circumstances.
- 3.4 In case of a disputed provision, the remaining provisions of this Agreement shall remain in full force and effect during the dispute. If any provision of this Agreement is deemed unenforceable or invalid, the remaining provisions of this Agreement shall remain in full force and effect.
- 3.5 This Agreement shall become effective upon being signed and chopped by the Parties.
- 3.6 This Agreement can be executed in as many originals as needed, while each original shall have the same legal effect, and each Party shall retain no less than one (1) original.

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[Signature Pages]

Beijing Unis Memory Technology Co., Ltd.
(Seal)

Signature: _____

Name: Dao-Jie Ma

Title: Legal Representative

Date: _____, 2019

[Signature Pages]

ChipMOS TECHNOLOGIES (BVI) LTD.
(Seal)

Signature: _____

Name: Lien-Fa Chou

Title: Chairman

Date: _____, 2019

[Signature Pages]

Accretech (China) Co., Ltd.
(Seal)

Signature: _____

Name: Hao Chen

Title: Director/ General Manager

Date: _____, 2019

[Signature Pages]

Chao-Jung Tsai

Signature: _____

Date: _____, 2019

[Signature Pages]

Shih-Jye Cheng

Signature: _____

Date: _____, 2019

[Signature Pages]

Shanghai Zuzhu Business Consulting Partnership (Limited Partnership)
(Seal)

Signature: _____

Name: Lien-Fa Chou

Title: Representative of the Managing Partner

Date: _____, 2019

[Signature Pages]

Shou-Kang Chen

Signature: _____

Date: _____, 2019

[Signature Pages]

David W. Wang

Signature: _____

Date: _____, 2019

[TRANSLATION FOR REFERENCE ONLY]

Syndicated Loan Agreement

Borrower: ChipMOS TECHNOLOGIES INC.

Total Facility Amount: NT\$12,000,000,000

Lead Arranger and Banks: Taiwan Cooperative Bank Co., Ltd.
Bank of Taiwan Co., Ltd.
Land Bank of Taiwan Co., Ltd.
Taishin International Bank Co., Ltd.
Hua Nan Commercial Bank, Ltd.
Chang Hwa Commercial Bank Co., Ltd.
Yuanta Commercial Bank Co., Ltd.

Banks: First Commercial Bank Co., Ltd.
Taiwan Shin Kong Commercial Bank Co., Ltd.
Bank of Panhsin Co., Ltd.
Mega International Commercial Bank Co., Ltd.

Facility Agent: Taiwan Cooperative Bank Co., Ltd.

Collateral Agent: Bank of Taiwan Co., Ltd.

Execution Date: May 15, 2018

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PREAMBLE

ChipMOS TECHNOLOGIES INC. (VAT No.: 16130042) is a company organized and existing under the laws of the Republic of China. In order to repay existing debts to financial institutions (including, but not limited to, the outstanding amount under the NT\$13.2 billion (NT\$13,200,000,000) syndicated loan agreement entered into in 2016 to which Land Bank of Taiwan acted as the lead arranger) and to replenish its mid-term operating working capital, ChipMOS TECHNOLOGIES INC. has applied for a total facility in the amount of NT\$12 billion (NT\$12,000,000,000) to be extended by eleven (11) financial institutions, i.e., Taiwan Cooperative Bank Co., Ltd., Bank of Taiwan Co., Ltd., Land Bank of Taiwan Co., Ltd., Taishin International Bank Co., Ltd., Hua Nan Commercial Bank, Ltd., Chang Hwa Commercial Bank Co., Ltd., Yuanta Commercial Bank Co., Ltd. (above each a "Lead Arranger", and collectively, the "Lead Arrangers"), First Commercial Bank Co., Ltd., Taiwan Shin Kong Commercial Bank Co., Ltd., Bank of Panhsin Co., Ltd., and Mega International Commercial Bank Co., Ltd (above each a "Bank" and collectively, the "Banks"). The Banks agree that Taiwan Cooperative Bank Co., Ltd. shall act as facility agent, and Bank of Taiwan Co., Ltd. shall act as collateral agent, to handle all matters relating to the facility and exercise the right hereunder for and on behalf of the Banks. The parties hereto have executed this syndicated loan agreement (hereinafter, the "Agreement") and agree as follows:

I. General

1. Definitions

- 1.1. **“Borrower”** shall mean ChipMOS TECHNOLOGIES INC.
- 1.2. **“Facility Agent”** shall mean Taiwan Cooperative Bank Co., Ltd.
- 1.3. **“Collateral Agent”** shall mean Bank of Taiwan Co., Ltd.
- 1.4. **“Agents”** shall mean the Facility Agent and the Collateral Agent collectively. In the event that the Agents have any disagreements in connection with their capacity, power or obligations hereunder, they shall settle such disagreements through negotiation and notify the Borrower and other Banks accordingly.
- 1.5. **“2016 Syndicated Loan”** shall mean the syndicated loan agreement dated May 16, 2016 with the facility amount of NT\$13.2 billion (NT\$13,200,000,000) (hereinafter any amount without specifying currencies referring to New Taiwan dollars), executed by the Borrower and ten (10) financial institutions, i.e., Land Bank of Taiwan Co., Ltd., Bank of Taiwan Co., Ltd., Taiwan Cooperative Bank Co., Ltd. (as the lead arrangers), Taishin International Bank Co., Ltd., Chang Hwa Commercial Bank Co., Ltd., Hua Nan Commercial Bank, Ltd., Yuanta Commercial Bank Co., Ltd., Ta Chong Bank Co., Ltd., Taiwan Shin Kong Commercial Bank Co., Ltd., Bank of Panhsin Co., Ltd., the purpose of which was to repay the Borrower’s then existing debts to financial institutions and to replenish its mid-term operating.
- 1.6. **“Existing Indebtedness”** shall mean the outstanding principal balance payable by the Borrower, including but not limited to those under the 2016 Syndicated Loan.
- 1.7. **“Details of Repayment Schedule”** shall mean the list containing the Existing Indebtedness which will be repaid by advances under the Facility as contemplated by the Borrower, substantially in the form of Schedule 3.
- 1.8. **“Facility”** shall mean Tranche A Facility and Tranche B Facility collectively unless otherwise specifying Tranche A Facility or Tranche B Facility.
- 1.9. **“Facility Amount”** shall mean the facility amount for each facility under this Facility.
- 1.10. **“Total Facility Amount”** shall mean the aggregate Facility Amounts under the Facility, which is NT\$12 billion (NT\$12,000,000,000).
- 1.11. **“Commitment Amount”**, **“Commitment Percentage”** shall mean the amount and percentage each Bank agrees to extend individually under the Facility as set out in Schedule 2, which shall be reduced or cancelled in accordance with the Agreement from time to time.
- 1.12. **“Aggregate Commitment Amount”** shall mean the aggregate Commitment Amounts, which is NT\$12 billion (NT\$12,000,000,000).

- 1.13. **“Majority Resolution”** shall mean, if the first drawdown has not been made, or if the first drawdown has been made but the outstanding principal balance is zero, the resolution or written consent of the Banks, the aggregate Commitment Amounts of which exceed two-thirds of the Total Facility Amount; or, if the first drawdown has been made, the resolution of the Banks, the aggregate outstanding principal balance of which exceed two-thirds of the then aggregate outstanding principal balance of all the Banks. Provided, however, that the Facility Agent may take any action in respond to the change of laws and rules as requested by the competent authorities by notifying the Banks and the Borrower.
- 1.14. **“First Drawdown Date”** shall mean the date on which the first drawdown is made, being the commencement date of the Facility Period; provided, however, the expiry date of three (3) months commencing from the execution date of the Agreement shall be deemed as the First Drawdown Date in the event that no drawdown has been made during the first three-month period.
- 1.15. **“Bank Business Days”** shall mean a full banking business day on which banks in the island of Taiwan are open for business pursuant to relevant laws and regulations.
- 1.16. **“Repayment Place”** shall mean the location of the Hsinchu branch of the Facility Agent.
- 1.17. **“Annual Interest Rate”** shall mean the interest rate calculated on the basis of a year of three hundred sixty-five (365) days.
- 1.18. **“Promissory Note”** shall mean the promissory note in the form of Exhibit 2 hereto issued or replaced by the Borrower in accordance with this Agreement.
- 1.19. **“Note Authorization”** shall mean the written authorization in the form of Exhibit 3 hereto issued by the Borrower, authorizing the Facility Agent to complete the Promissory Note as provided therein.
- 1.20. **“Duration Period of the Facility”** shall mean, unless otherwise provided in this Agreement, the period from the execution date of this Agreement to and until the full repayment of all the note obligations (including any indebtedness arising out of issuance, endorsement, acceptance, guarantee of note or any other activities), principal, interest, default interest, penalties, advances, arranger’s fee, agent’s fee, commitment fee, compensations, fees for amendment of the Agreement, appraisal fee of the Collateral, registration (or registration for the change of rights) fee of the Collateral, insurance premium, expenses for obtaining a writ of execution, expenses for compulsory enforcement, expenses for participation of distribution, other fees, damages due to the failure to perform all the obligations herein and other debt agreed to be borne by the Borrower, and the full performance of all its obligations under the Agreement.

- 1.21. **“Collateral”** shall mean collectively (1) the three buildings with Building Nos. 13, 29 and 36, Keguan Section, Baoshan Township, Hsinchu County and with House No. 1, R&D Road 1, Baoshan Township, Hsinchu County, and its ancillary attachments situated thereon (the “Hsinchu Science Park Plant”), which are owned by the Borrower, and located at Lot Nos. 2-2 and 5, Keguan Section, Baoshan Township, Hsinchu County, owned by Hsinchu Science Park Bureau; (2) the six buildings with Building Nos. 1, 2, 3, 4, 612 and 613, Xinke Section, Xhinshr District, Tainan City and with House No. 5, Nanke 7th Road, Xhinshr District, Tainan City, and its ancillary attachments situated thereon, which are owned by the Borrower, and located at Lot No. 55, Xinke Section, Xhinshr District, Tainan City, owned by Southern Taiwan Science Park Bureau; along with the three buildings, with Building Nos. 130, 145 and 146, Xinke Section, Xhinshr District, Tainan City and with House No. 3, Nanke 7th Road, Xhinshr District, Tainan City, and its ancillary attachments situated thereon, which are owned by the Borrower, and located at Lot No. 40, Xinke Section, Xhinshr District, Tainan City, owned by Southern Taiwan Science Park Bureau (the “Tainan Plant”); (3) the four pieces of land located at Lot Nos. 1072, 1073, 1074 and 1077, Taihe Section, Zhubei City, Hsinchu County, and the three buildings with Building Nos. 251-1, 251-2, and 251-3 and with House No. 37, Xintai Rd., Zhubei City, Hsinchu County, and its ancillary attachments situated thereon, which are owned by the Borrower (the “Zhubei Plant”); (4) the two pieces of land located at Lot Nos. 421 and 424, Taihe Section, Zhubei City, Hsinchu County, and the four buildings, with Building Nos. 65-1, 65-2, 65-3 and 65-4 and with House No. 112, Zhonghe St., Zhubei City, Hsinchu County, and its ancillary attachments situated thereon, which are owned by the Borrower (the “2nd Zhubei Plant”); (5) the two pieces of land located at Chienshing Sub-Land Lot Nos. 18 and 18-1, Chienshing Section, Hukou Township, Hsinchu County, and the two buildings with Building Nos. Chienshing Sub-Land Lot Nos. 1526-1 and 1526-2, Chienshing Section, Hukou Township, Hsinchu County and with House No. 4, Rende Road, Hukou Township, Hsinchu County, and its ancillary attachments situated thereon, which are owned by the Borrower (the “Hukou Plant”); and (6) all machinery and equipment placed in the buildings and its ancillary attachments provided in (1) to (5) above. The first priority mortgage with the maximum secured amount over the aforesaid real estate property and chattel is created in favor of Bank of Taiwan Co., Ltd., which is the Collateral Agent.
- 1.22. **“Net Worth”** shall mean the amount of shareholders’ equity.
- 1.23. **“Current Ratio”** shall mean the ratio of current assets to current liabilities.
- 1.24. **“Leverage Ratio”** shall mean the ratio of total liabilities to Net Worth.
- 1.25. **“Interest Coverage Ratio”** shall mean the ratio of the sum of net profit before tax, interest expenses, depreciation and amortization to interest expenses.

1.26. **“Risk Participation Percentage”** shall mean, in connection with the matters relevant to the Facility and the Banks, the Commitment Percentage of respective Bank prior to the first drawdown by the Borrower, or after the first drawdown but no outstanding principal balance; or, after the first drawdown is made by the Borrower, the percentage of the aggregate outstanding principal balance payable to respective Bank to the total outstanding principal balance payable under the Facility.

1.27. **“Officers of the Agents”** shall mean personnel such as the managers, staff or agents of the Agents.

2. Total Facility Amount and Allocation

2.1. The Total Facility Amount is NT\$12 billion (NT\$12,000,000,000) and will be allocated as follows, for the Borrower to repay the Existing Indebtedness and replenish its mid-term operating working capital:

2.1.1. Tranche A Facility: The account shall be classified as medium-term (secured) loan, and the Facility Amount is NT\$8.4 billion (NT\$8,400,000,000). Tranche A Facility may be drawn on a non-revolving basis.

2.1.2. Tranche B Facility: The account shall be classified as medium-term loan, and the Facility Amount is NT\$3.6 billion (NT\$3,600,000,000). Tranche B Facility may be drawn on a revolving basis.

2.2. Regarding Tranche A Facility, each Bank may first extend loans classified as either medium-term loan or medium-term secured loan. Should the loan be extended as a medium-term loan, the classification of the account shall be changed to medium-term secured loan after the Collateral Agent has obtained the rights of first priority mortgage with the maximum secured amount over all of the Collaterals.

3. The Banks' Participation in the Loan

3.1. The Bank shall perform its obligation under the Agreement in accordance with the Commitment Amount set out in Schedule 2. Unless otherwise provided in the Agreement, any Bank shall, no later than 12:00 P.M. (noon time) of one (1) Bank Business Days prior to the date as set forth in the Drawdown and/or Refinance Request, notify the Borrower and the Facility Agent in writing if it fails to make advances in accordance with this Agreement, and the Commitment Amount or Commitment Percentage of such Bank shall be reduced or cancelled. The Facility Agent and other Banks are not responsible for the act of such breaching Bank and the obligations of the Facility Agent and other Banks to make advances under the Agreement remains unchanged.

3.2. Unless otherwise provided in this Agreement, any Bank that has failed to make advances pursuant to Article 3.1 shall, in addition to making a reasonable effort to secure the same Facility Amount for the Borrower's use, indemnify the direct damage incurred by the Borrower therefrom, including but not limited to the funding cost of the Borrower which exceeds the interest rate or fee under the Agreement while the Facility Agent and other Bank shall in no event be held responsible for such failure; provided, however, the Borrower shall furnish evidence supporting the alleged direct losses and expenses.

4. Facility Period

The facility period of this Facility shall be five years commencing from the First Drawdown Date.

5. Repayment Place and Others

5.1. Repayment Place:

Unless otherwise agreed by all the Banks in advance, the Borrower shall repay any indebtedness or take any action under the Facility at the repayment place, otherwise the payment obligations hereunder shall not be discharged and the action taken shall not be effective.

5.2. Repayment Currency:

The Borrower shall, for all amount payable under the Agreement and its relevant documents, make any and all repayment pursuant to its nature (for instance, the principal, interest, default interest, fee or others) in New Taiwan dollars on the due date of respective amount payable in accordance with the relevant provisions hereof.

5.3. Repayment Date:

Unless otherwise provided in the Agreement, if the date the Borrower shall make any payment under the Agreement is not a Bank Business Day, such due date shall be extended to the next succeeding Bank Business Day unless such next succeeding Bank Business Day falls in another calendar month, in which case such due date shall end on the immediately preceding Bank Business Day.

6. Specimen Chops and/or Signature

6.1. The Borrower shall provide its specimen chops and/or signature (in the form of Exhibit 1) to the Agents specifying the name, position and the specimen chops and/or signature of each authorized signatory of the relevant documents under the Agreement. The specimen chops and/or signature shall be effective to the Borrower in respect of any matters relevant to the Agreement and the Borrower shall be absolutely bound by such specimen chops and/or signature. The Agents may rely on the genuineness of the documents with the specimen chops and/or signature attached as legally authorized and validly executed if the Officers of the Agents deem that the signature or chops conforms to the specimen preserved by the Agents. The Borrower will in no event deny the validity of the documents by asserting the forgery or theft of the specimen.

- 6.2. The Agents are entitled to refuse to proceed on any application or documents relevant to the Agreement provided by the Borrower if the Agents find the specimen chops and/or signature is inconsistent with the ones preserved by the Agents, and the Agent shall immediately notify the Borrower to make relevant corrections.
- 6.3. The Borrower shall notify the Agents in writing regarding the changes of its name, organization, Articles of Incorporation, representatives, authorization of the representatives or the specimen, and shall immediately apply for the alteration or cancellation of specimen chops and/or signature. The changes above shall not be a valid defense by the Borrower against the Banks before the Borrower notifies the Agents the same and completes the required procedure. The specimen chops and/or signature preserved by the Agents shall remain effective before the Borrower obtains the Agents' prior consent and completes the required procedures of alteration or cancellation of specimen chops and/or signature, and the Borrower shall bear full responsibility for all the transaction with the Bank arising from the utilization of the original specimen chops and/or signature.

7. Promissory Note and Note Authorization

- 7.1. The Borrower shall issue and deliver to the Facility Agent a Promissory Note (in the form of Exhibit 2) payable to the Facility Agent in the amount of NT\$12 billion (NT\$12,000,000,000) with the issue date as the First Drawdown Date together with Note Authorization (in the form of Exhibit 3) prior to the First Drawdown Date.
- 7.2. The Facility Agent may present the Promissory Note (as set forth in Article 7.1) and exercise the right thereon upon the acceleration of the entire or partial Facility declared by the Facility Agent in accordance with Article 26.2 if the Borrower has any event provided in Article 26.1.1 to 26.1.10.
- 7.3. The Facility Agent may request the Borrower to issue new Promissory Note and Note Authorization in exchange for such Promissory Note(s) and Note Authorization(s) previously delivered to the Facility Agent when it deems necessary and the Borrower shall not refuse such request. The Borrower shall not apply for exchange of any Promissory Note(s) and Note Authorization(s) due to its partial repayment of the loan under the Facility or its partial cancellation of Facility Amount.
- 7.4. The Facility Agent shall return the Borrower the Promissory Note and Note Authorization upon the expiration of the Facility Period unless the Facility Agent has exercised the right under the Promissory Note.

II Reserve Account

8. Reserve Account

- 8.1. The Borrower shall open a reserve account with the Facility Agent within the Duration Period of the Facility.
- 8.2. The Borrower shall cause the balance in the reserve account not less than the aggregate interest payments for the succeeding two (2) months from time to time. If the Borrower complies with the aforesaid condition and does not have any event of default, the Borrower may transfer and use the exceeding amount of the reserve account.
- 8.3. Within the Duration Period of the Facility, the Borrower shall not assign, change, close, create pledge or other encumbrances, entrust or dispose over the reserve account in any other form.

III Interest Rate, Tax and Expense

9. Interest Rate and Tax

9.1. Interest Rates:

9.1.1. Tranche A Facility:

The interest rate of Tranche A Facility shall be calculated based on the reference rate plus a margin of zero point two percent (0.20%) per annum at the floating interest rate and rounded to the nearest fourth decimal point. Within the Duration Period of the Facility, the interest rate before tax of Tranche A Facility shall not be lower than one point seven percent (1.70%), or the interest rate before tax shall be one point seven percent (1.70%).

9.1.2. Tranche B Facility:

The interest rate of Tranche B Facility shall be calculated based on the reference rate plus a margin of zero point two two five percent (0.225%) per annum at the floating interest rate and rounded to the nearest fourth decimal point. Within the Duration Period of the Facility, the interest rate before tax of Tranche B Facility shall not be lower than one point seven percent (1.70%), or the interest rate before tax shall be one point seven percent (1.70%).

9.2. Reference Rate:

The reference rate in Articles 9.1.1. and 9.1.2. shall mean the floating interest rate for one-year (as of the date of this Agreement, meaning the period of one-year up to two-year) time deposit as displayed in the bulletin of Chunghwa Post Co., Ltd (for non-large amount deposits) two (2) Bank Business Days prior to each drawdown date (or interest adjustment date).

9.3. Reference Rate Not Available:

If the reference rate is not available, the interest rate in accordance with the market practice for a longer period shall prevail. If the reference rate is still unavailable, the Facility Agent shall negotiate with the Borrower to reach mutual agreement on an alternative rate. Provided, however, that the Facility Agent shall specify the reference rate should the Facility Agent and the Borrower cannot come to an agreement within thirty (30) calendar days. Such reference rate shall become retroactively effective from the relevant interest period for the calculation of the interest in question, and the Borrower must not object.

9.4. Interest Rate Adjustment Date:

When there is a change in the reference rate, the interest rate adjustment date shall be the next interest payment date.

9.5. Interest Payment Date:

9.5.1. Interest shall be paid by the Borrower and calculated in accordance with the actual number of days elapsed on the basis of a year of three hundred sixty-five (365) days.

9.5.2. Interest payment date under the Facility shall be the last date of each calendar month. The Borrower shall pay interests on a monthly basis, and the monthly corresponding date of the First Drawdown Date shall be the interest payment date. If there be no such corresponding date, the last date of such month shall be the interest payment date. If such date is not a Bank Business Day, the interest payment date shall be extended to the next succeeding Bank Business Day unless such next succeeding Bank Business Day falls in another calendar month, in which case such payment date shall be on the immediately preceding Bank Business Day.

9.6. Default Interest and Penalties:

In the event that the Borrower shall fail to timely pay any principal or interest due and payable hereunder, the Borrower shall pay default interest on such principal or interest at the default interest rate of one point five percent (1.50%) per annum above the rate of interest applicable to the Facility commencing on the due date (inclusive) and ending on the date of actual payment. The default interest rate shall be a floating rate corresponding to the interest rate. With respect to any principal or interest due and unpaid for a period of less than six (6) months, a penalty charge shall be paid at the rate equal to ten percent (10%) of the default interest rate; for any amount due and unpaid for a period exceeding six (6) months, a penalty charge shall be paid at the rate equal to twenty percent (20%) of the default interest rate. If the Borrower fails to pay any amount which is due for a period of more than one (1) year after demand for payment, the Facility Agent may roll over such default interest into any principal of the Facility for the calculation of interest.

- 9.7. Taxation:
- 9.7.1. The Borrower shall bear the business tax and stamp duty in connection with the interest, default interest and penalties under the Facility.
- 9.7.2. The business tax on the interest as set forth in Article 9.7.1 shall include the business tax of banking enterprise as set forth in the Value-added and Non-value-added Business Tax Act (5% under the current regulations); provided, however, within the Duration Period of the Facility, if the law of business tax applicable to the banking enterprise changes, such amended law shall apply.
- 9.7.3. The Borrower shall not withhold or deduct any portion of the current and future taxes (unless otherwise provided, including business tax and stamp duty) or fees in other nature from the amount due under this Facility. In the event that the Borrower is required by law to withhold or deduct any amount from payment above, the Borrower shall pay such additional amount as may be necessary in order that the actual amount received after deduction or withholding shall equal the amount that would have been received if such deduction or withholding was not required.
- 9.7.4. If there be any change in the law or the competent authorities' interpretation of the law that results in the Banks being required to pay additional taxes, or that the taxation basis has changed, the increased portion shall be borne by the Borrower.

10. Fees

10.1. Arranger's Fee and Agent's Fee:

The Borrower shall pay arranger's fee to the Arrangers, agent's fee to the Agents and other fees in the amount and payment terms agreed among the Borrower, Arrangers and Agents prior to the execution of this Agreement in a separate written agreement.

10.2. Commitment Fee:

10.2.1. Tranche A Facility:

In the event that upon the expiration of the drawdown period for Tranche A Facility, the amount drawn by the Borrower does not exceed seventy percent (70%) of the Tranche A Facility available amount, the Borrowers shall, within five (5) Bank Business Days after the expiry of the drawdown period, pay a commitment fee of zero point one percent (0.10%) on the difference between the amount drawn and seventy percent (70%) of the available facility amount to the Facility Agent in a lump sum for distribution to the Banks on a pro rata basis according to the Commitment Percentage. However, if the Tranche A Facility amount has been cancelled in accordance with Article 16 before the expiry of the drawdown period, the commitment fee shall not apply to the cancelled amount.

10.2.2. Tranche B Facility:

From the day after six (6) months from the First Drawdown Date to the expiration of the Facility Period, for once every six (6) months, if the average balance of the Borrower's Drawdown for the Tranche B Facility during each said six-month period does not reach fifty percent (50%) of the actual available Drawdown amount under the Tranche B Facility, the Borrower shall, at the end of relevant said period, pay a commitment fee at the rate of zero point one percent (0.10%) per annum on the difference of the aforesaid amount to the Facility Agent in a lump sum for distribution to the Banks on a pro rata basis according to the Commitment Percentage, provided that the last payment shall be made no later than the last day of the loan period. If the Tranche B Facility amount has been cancelled in accordance with Article 16 before the expiry of the drawdown period, the commitment fee shall not apply to the cancelled amount.

10.3. Waiver or Amendment Fee:

For waiver of any Event of Default or for any amendment of the Agreement (not upon the Banks' request) applied by the Borrower, regardless of whether the Banks' consent has been obtained, the Borrower shall pay an operation fee of NT\$30 thousand (NT\$30,000) per application to the Facility Agent. The Borrower shall further pay to the Facility Agent the aggregate amount of operation fees for NT\$10 thousand (NT\$10,000) per Bank. Each Bank shall reply whether it agrees within a period specified by the Facility Agent. After a Resolution has been made by the Bank pursuant to Article 37 and replied to the Borrower, the Facility Agent shall transfer the operating fee it received to each Bank.

10.4. Other Relative Fees:

Aside from the fees above, the Borrower shall bear all the expenses before the execution of the Agreement and during the Facility Period, including but not limited to the followings:

10.4.1. The expenses on organizing the Banks.

10.4.2. The attorneys' fee incurred by the Arrangers and Agents for the preparation, execution and discussion of the Agreement.

10.4.3. The signing ceremony expenses associated with this Agreement.

10.4.4. The expenses relevant with the appraisal for the Collaterals and the mortgage registration (or the registration for the change of rights).

10.4.5. The attorney's fee for amendments to the Agreement.

10.4.6. Other necessary expenses payable by the Borrower.

10.5. Payment Date of the Fees:

Unless otherwise provided herein, the Borrower shall pay the fees and expenses payable provided in this Article no later than five Bank Business Days upon the Borrower's receipt of the payment notification delivered by the Facility Agent; which also apply to the disbursements extended by the Banks; provided, however, the Banks are not obliged to make any disbursements.

10.6. Default Interest and Penalties to the Fees:

In the event that the Borrower shall fail to timely pay any fees or expenses, unless otherwise provided herein, the Borrower shall pay default interest on such fee or expenses at the rate which is one point five percent (1.5%) per annum above the applicable interest rate of the principal commencing from the day next to the expiry date of the period provided in Article 10.5 (for disbursements by the Banks, from the date of making disbursements) until the date of actual payment. The default interest rate shall be adjusted corresponding to the interest rate of principal. In addition to such default interest, with respect to any fees or expenses due and unpaid for a period of less than six (6) months, a penalty charge shall be paid at the rate equal to ten percent (10%) of the default interest rate; for any amount due and unpaid for a period exceeding six (6) months, a penalty charge shall be paid at the rate equal to twenty percent (20%) of the default interest rate. If the Borrower fails to pay any amount which is due for a period of more than one (1) year after demand for payment, the Facility Agent may roll over such default interest into any principal of the Facility for the calculation of interest.

IV Drawdown of Facility Amount

11. Conditions Precedent to First Drawdown

- 11.1. The Borrower has executed and delivered the Agreement; the contents of which have been agreed by all contracting parties.
- 11.2. All approvals required for the Facility, including but not limited to those from the government or other regulatory authorities, have been obtained by the Borrower.
- 11.3. A valid resolutions of the board of directors of the Borrower for approving, including but not limited to, the Facility, the creation of the first priority mortgage with the maximum secured amount over the Collateral in favor of the Collateral Agent, the execution by authorized representatives of the Agreement and any amendment thereto, Promissory Note, Note Authorization, Negative Pledge Certificate, Assignment of Insurance Interest, and all relevant documents. Representatives to sign the abovementioned documents shall have been duly authorized by the board of directors.

- 11.4. There is no material adverse change to the Borrower's financial conditions, business operations and properties, which may materially affect the Borrower's ability to perform its obligation hereunder.
- 11.5. The Borrower is not involved in litigation, non-contentious matter, arbitration, compulsory execution, administrative appeal, application for or being applied for settlement or bankruptcy under the Bankruptcy Act or reorganization under the Company Act; nor has the Borrower applied for a bailout program, or is in the process of dissolution, liquidation, split-up, suspension of business or other similar legal proceedings or disputes, which might have a material adverse effect on the Borrower's financial conditions, business operations and properties, and materially affect the Borrower's ability to perform its obligation hereunder.
- 11.6. The Borrower has not violated any law or breached any agreements, which might materially affect its ability to perform its obligations hereunder.
- 11.7. The Borrower has provided the Details of Repayment Schedule (in the form of Schedule 3) to the Facility Agent.
- 11.8. The Borrower has opened the reserve account with the Facility Agent.
- 11.9. Legal counsel to the Banks has issued a legal opinion regarding the Agreement, Promissory Note, Note Authorization and relevant documents; the contents of the opinion have been agreed by the Facility Agent.
- 11.10. If there is shareholder's loan existing before the First Drawdown Date, the Borrower shall provide the duly executed Subordination Undertaking by its shareholders (in the form of Exhibit 12).
- 11.11. The Promissory Note and Note Authorization have been issued by the Borrower and delivered to the Facility Agent for record.
- 11.12. Borrower has issued a Negative Pledge Certificate duly resolved by the Borrower's board of directors pursuant to Article 30 of the Banking Act.
- 11.13. Other conditions precedent and documents reasonably required by the Facility Agent.

12. Drawdown Period

12.1. Tranche A Facility:

The Borrower shall complete the drawdown on Tranche A Facility within three (3) months from the First Drawdown Date. Upon the expiry of such drawdown period, all undrawn Tranche A Facility amount shall be automatically cancelled and cannot be re-borrowed.

12.2. Tranche B Facility:

Tranche B Facility may be utilized by the Borrower on a revolving basis within the Facility Period. The term of facility for each drawdown may be ninety (90) or one-hundred and eighty (180) days. The expiry date for each drawdown shall not be later than the end of the facility period.

13. Documents for Drawdown

The Borrower shall fulfill the conditions precedent for the first drawdown provided in Article 11 and provide the following documents (in originals, unless otherwise specified that photocopies may suffice; photocopies of the documents shall be affixed with stamps of the Borrower and its representative, and certified to be accurate and complete copies) to the Facility Agent (unless otherwise requested by the Facility Agent, the documents which have already provided is not required to provide again), in form and substance satisfactory to the Facility Agent:

- 13.1. First drawdown (for the purpose of repayment of existing debts under the 2016 Syndicated Loan):
 - 13.1.1. A valid resolutions of the board of directors of the Borrower for approving, including but not limited to, the Facility, the creation of the first priority mortgage with the maximum secured amount over the Collateral in favor of the Collateral Agent, the execution by authorized representatives of the Agreement and any amendment thereto, Promissory Note, Note Authorization, Negative Pledge Certificate, Assignment of Insurance Interest, and all relevant documents. Representatives to sign the abovementioned documents shall have been duly authorized by the board of directors.
 - 13.1.2. The latest articles of incorporation, and the latest amendment of corporate registration card (with the register of directors) of the Borrower. Photocopies of the documents shall be affixed with stamps of the Borrower and its representative, and certified to be accurate and complete copies.
 - 13.1.3. Details of Repayment Schedule (in the form of Schedule 3).
 - 13.1.4. Specimen Chops and/or Signature of the Borrower (in the form of Exhibit 1).
 - 13.1.5. Promissory Note (in the form of Exhibit 2) and Note Authorization (in the form of Exhibit 3).
 - 13.1.6. Drawdown and/or Refinance Request (in the form of Exhibit 4).
 - 13.1.7. Negative Pledge Certificate (in the form of Exhibit 6).
 - 13.1.8. Subordination Undertaking (in the form of Exhibit 12).
 - 13.1.9. Opinion of Counsel (in the form of Exhibit 17).
 - 13.1.10. Photocopy of the Borrower's Procedures for Lending Funds to Other Parties.
 - 13.1.11. Photocopy of the Borrower's Procedures for Endorsement and Guarantee.

- 13.1.12. The Borrower's latest financial statements audited by certified public accountants.
- 13.1.13. Photocopy of supporting documents for the Borrower's reserve account.
- 13.1.14. Other necessary documents or certificates reasonably required by the Facility Agent.
- 13.2. Each Drawdown Other Than the First Drawdown:
 - 13.2.1. Drawdown and/or Refinance Request (in the form of Exhibit 4).
 - 13.2.2. Evidence of completion of creation of the first priority mortgage with the maximum secured amount over all of the Collateral in favor of the Collateral Agent.
 - 13.2.3. Assignment of Insurance Interest (in the form of Exhibit 13).
 - 13.2.4. Undertaking of Insurer (in the form of Exhibit 14).

14. Drawdown Method and Conditions

- 14.1. Drawdown Method:

With respect to the first drawdown, the Borrower shall, at least five (5) Bank Business Days prior to the First Drawdown Date (or such shorter period of time agreed by the Facility Agent), for any subsequent drawdown, at least three (3) Bank Business Days prior to the relevant drawdown date (or such shorter period of time agreed by the Facility Agent), submit a Drawdown and/or Refinance Request (in the form of Exhibit 4) and relevant documents required under the Agreement to the Facility Agent. Once the Borrower has issued the Drawdown and/or Refinance Request, it shall not be withdrawn or cancelled. The Facility Agent shall notify each Bank to make available the funds in accordance with its respective Participation Percentage by delivering a Drawdown and/or Refinance Notice (in the form of Exhibit 5) no later than two (2) Bank Business Days prior to the relevant date for advance. Each Bank shall remit its respective fund to the account designated by the Facility Agent, or complete the refinancing process, no later than 12:00 noon on the date specified in the Drawdown and/or Refinance Notice.
- 14.2. Conditions for the First Drawdown:
 - 14.2.1. For the first drawdown, the Borrower shall submit the Details of Repayment Schedule (in the form of Schedule 3) as the disbursement basis, and utilize the Tranche A Facility amount to first repay the outstanding principal balance under the 2016 Syndicated Loan; if such amount is insufficient for the repayment, Tranche B Facility amount may be utilized.
 - 14.2.2. The Borrower agrees that if the facility amount drawn has been remitted to the Borrower's account as designated by the Facility Agent, the Borrower is deemed to receive such advance once the money has been remitted into the account. The Borrower further agrees that by this Agreement, the Facility Agent is authorized to repay the Existing Indebtedness for the Borrower through transfer of money. The Borrower shall not withdraw or cancel such authorization or render it ineffective in any way.

14.3. Conditions for Subsequent Drawdown:

The Borrower shall have repaid the outstanding principal and interest under the 2016 Syndicated Loan, and completed the creation of the first priority mortgage with the maximum secured amount over the Collateral in favor of the Collateral Agent before it may apply for subsequent drawdown to the remaining Facility Amount under the Agreement.

14.4. Drawdown Conditions for Tranche B Facility:

14.4.1. The Borrower shall use the Tranche B Facility on a revolving basis within the Facility Period. The term of facility for each drawdown may be ninety (90) or one-hundred and eighty (180) days, and the expiry date for each drawdown shall not be later than the end of the facility period.

14.4.2. The Borrower shall make repayments in full on the maturity date of each loan under the Tranche B Facility. When the amount of Tranche B Facility is utilized on a revolving basis, the proceeds obtained for the new drawdown under Tranche B Facility could be used to directly repay in full the original outstanding balance under the Tranche B Facility, and this Agreement shall be used as proof that the funds have been received. Thus, in terms of the portion of equivalent amount, the Borrower and the Bank need not conduct any additional fund transfer actions, and the Borrower is deemed as having received the drawdown payment for that portion. Under any circumstances, the Borrower shall pay in full the outstanding principal under the Facility by the maturity date of the facility period.

14.5. Limitations in the drawdown amount:

Other than that the undrawn Facility Amount is less than NT\$300 million (NT\$300,000,000), each drawdown amount shall not be lower than NT\$300 million (NT\$300,000,000), and must be an integral multiple of NT\$100 million (NT\$100,000,000). However, this requirement is not applicable if the Facility Agent agrees otherwise.

V. Repayment of Principal

15. Repayment of Principal

15.1. Repayment of the Principal under Tranche A Facility:

The Borrower shall repay the principal balance drawn under Tranche A Facility by installment as from the expiry of six (6) months after the First Drawdown Date and thereafter in a six (6)-month interval, in ten (10) installments in total. For the first to the ninth installments, each repayment amount shall be four point five percent (4.5%) of the principal, and the remaining principal and interests shall be paid off in the tenth installment.

15.2. Repayment of the Principal under Tranche B Facility:

The Borrower shall make repayments in full on the maturity date of each loan under the Tranche B Facility. However, upon the maturity of each loan, the amount obtained from the new drawdown under Tranche B Facility may be used to directly repay the original outstanding parts, and this Agreement shall be used as proof that the funds have been received. In terms of the portion of equivalent amount, the Borrower and the Bank need not conduct any additional fund transfer actions. Under any circumstances, the Borrower shall pay in full the outstanding principal under the Facility by the maturity date of the facility period.

VI. Cancellation of Facility Amount

16. Cancellation of Facility Amount

- 16.1. The Borrower may cancel all or any portion of the undrawn Facility Amount if any and all conditions under Article 16.1.1 to 16.1.3 have been met; provided, however, any cancelled portion of the Facility Amount may not be re-borrowed and each Bank's Commitment shall be reduced on a pro-rata basis based on the Commitment Percentage:
- 16.1.1. Any partial cancellation shall be in the minimum amount of NT\$ 100 million (NT\$100,000,000) and shall be an integral multiple of NT\$ 20 million (NT\$20,000,000), or shall be the entire remaining Facility Amount under the Facility.
 - 16.1.2. The effective date for each cancellation shall be an interest payment date.
 - 16.1.3. Each cancellation shall be made by an irrevocable notification in writing to the Facility Agent at least fifteen (15) calendar days prior to the effective date of each cancellation.
- 16.2. If the Borrower cancels the Facility Amount not in accordance with the provisions under Article 16.1.1 to 16.1.3, it shall be liable for a compensation of zero point one five percent (0.15%) of the cancelled amount and shall pay such amount to the Facility Agent on the cancellation date for its distribution to other Banks based on the Commitment Percentage.

VII. Prepayment**17. Prepayment**

- 17.1. The Borrower may not prepay any principal balance not due and payable. However, the Borrower may prepay the outstanding principal balance in whole or in part if any and all conditions in Article 17.1.1 to 17.1.3 have been met; provided, however, any prepaid amount of the Tranche A Facility may not be re-borrowed:
- 17.1.1. Any partial prepayment shall be in the minimum amount of NT\$ 100 million (NT\$100,000,000) and shall be an integral multiple of NT\$ 20 million (NT\$20,000,000), or shall be the entire remaining Facility Amount under the Facility.
- 17.1.2. Each prepayment date shall be an interest payment date.
- 17.1.3. Each prepayment shall be made by an irrevocable notification in writing to the Facility Agent at least fifteen (15) calendar days prior to the prepayment date.
- 17.2. If the Borrower prepays the outstanding principal under the Facility in whole or in part not in accordance with the provisions under Article 17.1.1 to 17.1.3, it shall be liable for a compensation of zero point one five percent (0.15%) of the prepaid amount and shall pay such amount to the Facility Agent on the prepayment date for its distribution to other Banks based on the Risk Participation Percentage.
- 17.3. Where the Borrower makes prepayment to the Tranche A Facility, in addition to the payment of all interests and expenses due and payable, the prepayment shall be made in reverse order of the due date of installment (i.e. prepay first the installment that is due last).

VIII. Undertakings and Representations**18. Undertakings and Covenants**

Throughout the Duration Period of the Facility, the Borrower undertakes to perform including but not limited to the following:

- 18.1. The Borrower shall maintain the financial ratios set forth below:
- 18.1.1. Current ratio: shall not be lower than 100%.
- 18.1.2. Leverage ratio: shall not be higher than 150%.
- 18.1.3. Interest coverage ratio: shall not be lower than 2.5 times.
- 18.2. The financial ratios under Article 18.1.1 to 18.1.3 shall be based on the annual consolidated financial statements audited by certified public accountants on an annual basis (the annual review date being each March 31). When furnishing the aforementioned financial statements to the Facility Agent, the Borrower shall also issue a Statement of Non-violation of Financial Covenants (in the form of Exhibit 11). In the event that the Borrower fails to comply with any of the financial covenants under Article 18.1.1 to 18.1.3, it shall make improvement by capital increase for cash or other manners; provided that the Borrower shall pay a default charge at the rate of zero point one percent (0.10%) on the outstanding principal on the annual review date to the Facility Agent for its distribution to the Banks based on the Risk Participation Percentage. Such failure shall not be deemed as an Event of Default upon the full payment of the default charge. However, in the event that the Borrower fails to remedy to reach the required ratios (based on the consolidated financial statements audited/reviewed by certified public accountants) before the next annual review date, it shall be deemed a violation of financial ratios covenant.

- 18.3. The Borrower shall, within ninety (90) calendar days after the end of each financial year and within forty-five (45) calendar days after the end of each quarter, furnish to the Facility Agent with the consolidated financial statements audited/reviewed by certified public accountants.
- 18.4. The Borrower shall obtain and maintain all approvals, licenses and permits necessary for the Borrower's performance of the obligations herein and shall comply with all laws and regulations promulgated by the authorities in the Republic of China.
- 18.5. The Borrower shall notify the Facility Agent in writing within five (5) calendar days after it has passed any board resolution for engagement into any substantial investment (the amount of which reaches NT\$500 million (NT\$500,000,000) or its equivalent).
- 18.6. Unless otherwise provided herein, without obtaining a prior consent adopted by a Resolution, the Borrower shall not conduct any of the following acts:
 - 18.6.1. Change its primary scope or nature of business.
 - 18.6.2. Dispose of all or part of the Collateral or the main operational assets and revenue through sale, lease, assignment, creation of encumbrance (except for the creation of encumbrance or change of particulars of the mortgage as agreed by the Facility Agent for the purpose of restructuring the Facility) or any other means. However, the above restrictions shall not apply if, for the needs of operation, the Borrower changes one of chattels of the Collaterals, and provides the Facility Agent with Collateral approved by the Facility Agent (such Collateral is limited to chattels purchased within one year and assessed according to the amount set forth on relevant payment certificates, and shall not be lower than the net value of the original chattel after depreciation is deducted), or provides cash to repay the corresponding principal and interests of such Collateral. Further, such prepayment shall not be subject to the restrictions on prepayment under Article 17 of the Agreement.
 - 18.6.3. Lend company funds to others, except otherwise in accordance with the Borrower's Procedures for Lending Funds to Other Parties.

- 18.6.4. Except otherwise in accordance with the Borrower's articles of incorporation and Procedures for Endorsement and Guarantee, directly or indirectly become liable for other persons' debts through assumption of debts, issuing guarantees, issuing bills, endorsement of bills, bank guarantees, or any other means.
- 18.6.5. Unless required by the securities related laws or administrative orders or other relevant requirements, distribute any cash dividends when an event of default under the Agreement has occurred.
- 18.7. Among the Collateral, within the Hsinchu Science Park Plant, the Borrower and the Hsinchu Science Park Bureau have signed lease agreements on August 4, 2008 and July 25, 2014, respectively, for the respective land located at Land Lot Nos. 5 and 2-2 of Keguan Section, Baoshan Township, Hsinchu County; within the Tainan Plant, the Borrower and the Tainan Science Park Bureau have signed lease agreements on April 3, 2012 and July 1, 2014, respectively, for the respective land located at Land Lot No. 40 of Xhinke Section, Xhinshr District, Tainan City and Land Lot No. 55 of Xhinke Section, Xhinshr District, Tainan City. The Borrower shall ensure that the above lease agreements remain effective, and cannot be withdrawn, terminated, cancelled or assigned or have any event that may affect the validity of the lease agreements. The Borrower shall notify the Facility Agent in writing before the effective day of any amendment to the lease agreements, and shall certify that such amendments shall not have any material adverse effect on the Banks.
- 18.8. Except where the Borrower will be the surviving company after the merger and the merger shall not have a material adverse effect on the Borrower's financial and operational conditions, the Borrower shall not spin-off or merger with any other party.
- 18.9. The Borrower shall ensure that the repayment rank for the unsecured debt under the Facility shall be equal to other unsecured debt of the Borrower, unless the priority ranking is mandatory pursuant to law or is necessary for ordinary business operation.
- 18.10. If there is any shareholder's loan, the Borrower shall provide the Subordination Undertaking (in the form of Exhibit 12) duly executed by such shareholder.
- 18.11. The Borrower shall timely pay all taxes and repay any other indebtedness when due.
- 18.12. There has been no violation of laws or other agreements by the Borrower which may have an adverse effect on its ability to perform the Agreement.
- 18.13. The Borrower shall ensure that matters regarding environmental protection, pollution prevention and waste disposal comply with relevant laws and regulations at all times, and the Borrower shall obtain the various approvals from competent authorities pursuant to relevant laws and regulations.

19. Representations for Execution of the Agreement

The Borrower hereby represents and warrants the followings upon the execution of the Agreement:

- 19.1. The Borrower is duly organized and validly existing as a corporation under the laws of the Republic of China, and has obtained all the approvals from the government and other administrative bodies.
- 19.2. The Borrower is qualified to do its current business, has the legal right to own its assets, and has the corporate power and authority to enter into, deliver and perform the Agreement and issue the Promissory Note and Note Authorization. The execution and performance of the Agreement and its relevant documents by the Borrower have not violated any laws or orders, its contractual agreement with any third party, its articles of incorporation or other provisions, and no documents are forged or modified.
- 19.3. The execution, delivery and performance of this Agreement and its relevant documents do not violate any requirements of laws and orders, and will not result in any violation of laws or contractual agreements.
- 19.4. By the execution of the Agreement, the Borrower has obtained the resolutions validly adopted by the Borrower's board of directors to approve the Facility (or may be ratified afterwards if agreed by the Facility Agent).
- 19.5. The Borrower is not in violation of any binding contractual agreement or documents to which the Borrower is a party.
- 19.6. Upon the application of drawdown under the Facility, the information and contents of the documents provided by the Borrower to the Banks are true and correct.
- 19.7. The Borrower is not involved in litigation, non-contentious matter, arbitration, compulsory execution, administrative appeal, application for or being applied for settlement or bankruptcy under the Bankruptcy Act or reorganization under the Company Act; nor has the Borrower applied for a bailout program, or is in the process of dissolution, liquidation, split-up, suspension of business or other similar legal proceedings or disputes, which might have a material adverse effect on the Borrower's financial conditions, business operations and properties, and materially affect the Borrower's ability to perform its obligation hereunder.
- 19.8. There is no material adverse change to the Borrower's financial conditions, business operations and properties, which may materially affect the Borrower's ability to perform its obligation hereunder.
- 19.9. The financial information provided by the Borrower is accurate.
- 19.10. The Borrower has not violated any law or breached any agreements which lead to material adverse changes in the financial condition, business operation and property of the Borrower and might materially affect its ability to perform its obligations hereunder.

20. Representations for Each Drawdown

The Borrower hereby represents and warrants the followings upon each drawdown of the Facility:

- 20.1. The representations, warranties, undertakings and covenant as well as the information and documents provided by the Borrower remain true and correct; all documentation previously delivered pursuant to the Agreement remains in full force and effect during the Duration Period of the Facility, without modification or has been updated with notification; or the most updated documentation has been voluntarily provided or provided upon the request by the Banks and remains in full force and effect.
- 20.2. There has been no event of default and the performance of the Agreement will not violate the Borrower's contractual agreements with any third party.

IX. Security

21. Collateral

21.1. Provision of Collateral:

- 21.1.1. The Borrower agrees to provide the Collateral and create the first priority mortgage with the maximum secured amount over the Collateral in favor of the Collateral Agent. The Detailed Terms and Conditions of Land and Building Mortgage Agreement (in the form of Exhibit 7), Detailed Terms and Conditions of Building Mortgage Agreement (in the form of Exhibit 8), and Chattel Mortgage Agreement (in the form of Exhibit 9) contained herein shall be used for the filing for registration or creation of, in favor of the Collateral Agent, the first priority mortgage with the maximum secured amount over the real estate, and the first priority mortgage with the maximum secured amount over the chattel.
- 21.1.2. Among the Collateral, the land, building and affiliated facilities shall be appraised based on the amounts stated in the appraisal report issued by professional appraisal firms recognized by the Facility Agent. The secured loan value for land shall be calculated based on eighty percent (80%) of the appraised value deducted by the land value increment tax based on the announced current land value, and that for building and affiliated facilities shall be calculated based on eighty percent (80%) of the appraised value deducted by depreciation. The first priority mortgage with the maximum secured amount over the abovementioned Collateral shall be created in favor of the Collateral Agent based on the appraised value within ten (10) Bank Business Days from the First Drawdown Date (or within the period agreed on by the Collateral Agent).

21.1.3. Among the Collateral, the machinery and its ancillary equipment shall be appraised based on the amounts stated in the appraisal report issued by professional appraisal firms recognized by the Facility Agent. The secured loan value for machinery and its ancillary equipment shall be calculated based on the table set forth below and deducted by depreciation. The first priority mortgage with the maximum secured amount over the abovementioned Collateral shall be created in favor of the Collateral Agent based on the appraised value within ten (10) Bank Business Days from the First Drawdown Date (or within the period agreed on by the Collateral Agent). At that time, the Borrower shall provide the Collateral Agent with the photographs or softcopy of digital photos of the machinery and its ancillary equipment, which, at its prominent parts, has been imprinted or affixed with the label demonstrating that the mortgagee of the Chattel shall be the Collateral Agent.

Remaining durable years	Method of calculation for the secured loan value
Within (including) 24 months	50%
Exceeding 24 months but less than (including) 48 months	65%
Exceeding 48 months	70%

21.1.4. Once the Borrower has completed the creation of the first priority mortgage with the maximum secured amount over the Collateral in favor of the Collateral Agent pursuant to Articles 21.1.2. and 21.1.3., the Borrower shall deliver the Assignment of Insurance Interest (in the form of Exhibit 13) and Undertaking of Insurer (in the form of Exhibit 14) within twenty (20) Bank Business Days of the First Drawdown Date.

21.1.5. The Borrower shall, prior to the First Drawdown Date, issue a Negative Pledge Certificate (in the form of Exhibit 6) duly resolved by the Borrower's board of directors pursuant to Article 30 of the Banking Act.

21.2. Designation of Mortgagee:

The Agreement is entered into by and among the Borrower and the Banks. Each Bank hereby agrees to register all Collateral and relevant documents provided by the Borrower under the Agreement under the name of the Collateral Agent in its capacity of a joint and several creditors and for the joint and several benefits of the Banks. Each Bank further agrees to designate the Collateral Agent as the mortgagee of the Collateral or other right holder of security in any other form as well as the loss payee of the relevant insurance.

21.3. Scope of Debt Secured by Collateral:

The Borrower agrees to provide the Collateral as security to all indebtedness incurred by the Borrower to the Banks under the Agreement, including the note obligations (including those from issuing notes, endorsement of notes, acceptance, note guarantee and other note debts), principal, interest, default interest, penalties, disbursement, arranger's fee, agent's fee, commitment fee, compensations, amendment fee, appraisal fee of the Collateral, registration (or registration for the change of rights) fee of the Collateral, insurance premium, expenses for obtaining a writ of execution, expenses for compulsory enforcement, expenses for participation of distribution, other fees, damages due to the failure to perform all the obligations herein and other debt agreed to be borne by the Borrower.

21.4. Borrower's Representation I:

The quality, amount, and specification of Collateral conform to the information or documents provided by the Borrower, and the Collateral is wholly and legally owned by the Borrower. There is no encumbrance or right over the Collateral beyond the knowledge of the Collateral Agent upon the execution of the Agreement. The Collateral may be inspected by the Collateral Agent from time to time upon its request. The Borrower shall provide other assets of equivalent or higher value compared to the Collateral or repay partial indebtedness, and further indemnify the Banks against any dispute arising from the inconformity of the Collateral.

21.5. Borrower's Representation II:

If any of the Collateral is damaged, loss or devaluation due to the natural disaster, change of circumstance, act of third party or other event not attributable to the Borrower, the Borrower shall notify the Collateral Agent immediately and restore the secured loan value by providing additional cash or additional security as approved by a Resolution of all the Banks. The Banks shall not be liable for any damage or have any other responsibilities. The Facility Agent may prescribe a deadline for the provision of additional cash or security, or for prepayment of any deficiency, without being subject to the requirements under Article 17 of the Agreement. If the Borrower fails to meet the deadline, the Facility Agent may act in accordance with Article 26 of the Agreement.

21.6. Transformation of Collateral:

If any of the Collateral is expropriated or for any other reason, consequently causing the Borrower eligible for compensation, indemnity or other interest therefore, the secured indebtedness of the Banks shall remain on the compensation, indemnity or other interest in the form of pledge. The Collateral Agent is entitled to receive such proceeds for the benefit of the Banks or exercise the pledge as evidenced by the Agreement which constitutes the authorization by the Borrower. The Borrower shall not rescind, revoke or amend such authorization or render the authorization under this Article without effect. However, if after the Facility Agent has offset the amount, there is deficiency of the secured loan value of the first priority mortgage with the maximum secured amount over the Collateral, the Borrower shall make up such deficiencies or prepay such amount, without being subject to the requirements under Article 17 of the Agreement. If the Borrower fails to take the above measures within a prescribed period, the Facility Agent may act in accordance with Article 26 of the Agreement.

- 21.7. Disposal and Diminishment of Collateral:
Unless otherwise provided herein or approved by a Resolution of all the Banks, the Borrower shall not create encumbrance over, sell, lend, transfer, entrust, dismantle, reconstruct or expand the Collateral, in part or in full, or take on any action which could diminish the value of the Collateral.
- 21.8. Expenses of the Security:
The Borrower shall bear all the expenses incurred by the Banks in respect of the Collateral or the enforcement of the mortgage.
- 21.9. Return of Documents and Request for Invalidation of Mortgage:
The Borrower shall not request for invalidating the mortgage over Collateral, in whole or in part, prior to the repayment of all debts under this Facility. The Collateral Agent shall invalidate the mortgages and return the relevant documentation after all indebtedness under this Agreement are paid in full by the Borrower, unless otherwise prescribed under the Agreement.
- 21.10. Maintenance of Collateral:
The Borrower shall properly maintain the Collateral within the Duration Period of the Facility.
- 21.11. Insurance for Collateral:
- 21.11.1. The Borrower shall take out the insurance over the Collateral in the amount and kind recognized by the Collateral Agent and consistent with the practice of the business of like kind and subsequently assign the relevant insurance interests to the Collateral Agent by the Assignment of Insurance Interest (in the form of Exhibit 13) by designating the Collateral Agent as the sole loss payee to the relevant insurance. The original insurance policy and the copies of the receipt of insurance premium shall be retained by the Collateral Agent on behalf and for the benefit of the Banks. The Borrower shall also procure the Undertaking of Insurer (in the form of Exhibit 14) issued by the insurer and deliver such to the Collateral Agent.
- 21.11.2. Unless otherwise approved by a Resolution of all the Banks, the Borrower shall not change the loss payee of the insurance, the mortgagee or the assignee of insurance interests.

- 21.11.3. The Borrower shall renew the insurance taken out in Article 21.11.1 upon the expiry of the insurance policy and shall bear all the expenses therefrom. If the Borrower fails to renew such in time or the insurance amount is not sufficient to cover the risk and such failure or insufficiency is not remedied within the period prescribed by the Collateral Agent, the Borrower hereby agree that the Collateral Agent, when it deems necessary, is authorized to take out or renew the insurance as evidenced by the Agreement with a written notice to the Borrower, and relevant premium shall be borne by the Borrower. However, none of the Collateral Agent nor the Banks are obliged to take out insurance or disburse the premium. If the Collateral Agent has paid insurance premium on the Borrower's behalf, the Borrower shall make repayments within five (5) Bank Business Days after the Collateral Agent has served the request for payment upon the Borrower. If the Borrower fails to make the payment within such period, the Borrower shall pay the default interest, at an interest rate by adding a one point five percent (1.50%) per annual on the then highest interest rate under the Facility, from the following day of the date the amount due to the date of actual payment. The default interest rate shall be adjusted corresponding to the interest rate of the Facility. Further, for any insurance premium due and unpaid for a period of less than six (6) months, a penalty charge shall be paid at the rate equal to ten percent (10%) of the default interest rate; for any amount due and unpaid for a period exceeding six (6) months, a penalty charge shall be paid at the rate equal to twenty percent (20%) of the default interest rate. If the Borrower fails to pay the interest premium which is due for a period of more than one (1) year after demand for payment, the Collateral Agent may roll over such default interest into any insurance premium for the calculation of interest.
- 21.11.4. If the insured object set forth in Article 21.11.1. has diminished, the Borrower shall notify the Collateral Agent immediately after the Borrower knows such event, and provide all necessary assistance; provided, however, that the compensation for the covered losses paid by the insurer shall be handled as follows:
- 21.11.4.1. If the damage to the insured object is repaired or reconstructed by a third party within three (3) months after the Collateral Agent received the insurance compensation, the Borrower shall provide relevant documents and the expenditure certificates to the Collateral Agent. The Collateral Agent shall, within the amount of insurance compensation, pay to the third party based on the expenditure certificates. If a third party has repaired or reconstructed the insured object and been reimbursed by the Borrower, the Borrower shall provide relevant documents and the expenditure certificates to the Collateral Agent. The Collateral Agent shall, within the amount of the insurance compensation, pay to the Borrower based on the expenditure certificates.

- 21.11.4.2. If the insured object cannot be repaired or reconstructed, entirely or partially, within three (3) months after the Collateral Agent has received the compensation for the damage claims, such compensation shall be used to repay the principal of the Borrower's debt, and such prepayment shall be exempt from the restrictions under Article 17 of this Agreement.
- 21.11.5. If the Collateral has suffered loss, regardless the reasons given by the insurance company to deny or delay the payable insurance compensation, or if the compensation payment is insufficient, the Collateral Agent may request the Borrower to pay the deficiency within a designated period, and such payment shall be exempt from the restrictions under Article 17 of this Agreement. If the Borrower does not make any payment within the designated period, and a Resolution of the Banks resolves that the damage to the Collateral has an impact on ensuring the Banks' claims under the Facility, the Banks may request the Borrower to immediately repay all debts.

X. Preservation of Right

22. Supervision and Reporting

- 22.1. The Borrower agrees to be supervised by the Facility Agent regarding the utilization of the Facility. The Facility Agent, when necessary, may audit the business operations and financial status of the Borrower and review the relevant books, financial statements (including consolidate financial statement required by the competent authority), and notes and documents.
- 22.2. The Facility Agent, when necessary, may request the Borrower to deliver for its review the relevant documents provided in Article 22.1 above, or to provide financial report audited by certified public accountants as required by the applicable laws. The expenses so incurred shall be borne by the Borrower.
- 22.3. The Borrower shall voluntarily inform the Facility Agent of any changes to the conditions for drawdown, covenants and others, including but not limited to, financial or business status, financial ratios or other information that would otherwise influence the evaluation by the Banks, or any change to the performance, payment of principal or interests by the Borrower hereunder.

23. Handling Counterfeit, Alterations and Damages to the Documents

- 23.1. If any negotiable instruments or documents provided by the Borrower or any other documents issued under the Agreement by the Borrower is counterfeited or altered; damaged, lost, or delayed during the course of its transmission due to any accidents, incidents or other force majeure events; except for the apparent mistakes of the amount recorded on the book, subpoena, any computer-produced vouchers, debt certificates, and copies of correspondences at the Agent's place which has been proven by the Borrower and corrected by the Agents immediately, the Borrower shall acknowledge the amount as recorded on the documents set forth above, and shall discharge the debt, including interest and principal when due, or reissue a debt certificate to the Agents before due. In any event when the instruments issued by Borrower under the Agent's custody is lost, damaged or destroyed, the Borrower shall cooperate with the Agents to report such loss, provided that the cost so incurred shall be borne by the Agents.
- 23.2. In the event that the Borrower's signatures and chops are appropriated and used on the notes, declaration or other documents held by an Agent in respect of the Facility and the Agent is a bona fide holder without knowledge of such appropriation; or in the event that the Borrower's signatures and chops are forged, the Borrower shall be liable for any damages suffered by the Banks and Agents incurred therefrom unless it is attributable to the Agents' willful act or gross negligence. When the Facility Agent, based on the notes held by the Agents, has proved the remittance of proceeds to Borrower's account in accordance with this Agreement, the Borrower shall not deny the existence of the debt by claiming that the signatures and chops were appropriated or forged.

24. Cooperation

- 24.1. The Borrower agrees and undertakes to promptly take all such actions and execute all such documents as may be required under the Agreement.
- 24.2. The Borrower agrees that the Agents or each Bank is entitled to outsource the duty of collecting the receivable debt to other agencies in compliance with "Regulations Governing Internal Operating Systems and Procedures for the Outsourcing of Financial Institution Operation" regulated by the Financial Supervisory Commission, and "Rules on Financial Institutions' Outsourcing the Receivable Debt Collection Operations" regulated by the Bankers Association of the R.O.C. and other relevant regulations.
- 24.3. The Borrower agrees, and undertakes to cause its representative (including its succeeded representative during the Facility Period) to agree, that each Bank, for the purpose of assignment of its credit rights, may provide all information relevant to the indebtedness of the Borrower hereunder (including, without limitation, information collected, processed and used (including through international transmission) pursuant to Article 25) to the assignee (including prospective assignee) and the appraiser of the proposed assignment; provided, however, that the Banks shall request such assignee or appraiser to keep the information confidence. In the event that any of the Banks entrusts its asset or assigns its credit rights for the purpose of financial asset securitization, the Borrower agree that the Bank may notify the Borrower by announcement instead of individual notice, without delivering the notice or evidence of announcement to the Borrower.

XI. Consent to Collection, Processing and Use (Including International Transmission) of Information

25. Consent to Collection, Processing and Use (Including International Transmission) of Information

Each of the Borrower and the representative of the Borrower (the same also applies to the case of changes in representative within the Duration Period of the Facility, and the Borrower is responsible for notifying such persons), aside from giving consent to the following, also acknowledges that it/he has been notified by the Agents of the relevant details set forth in Paragraph 1, Article 8 of the Personal Data Protection Act (or the "PDPA"), and has agreed to the execution of relevant documents per the Agents' request, which is provided to each Banks for reasonable use:

- 25.1. Each Banks and other relevant institutions, pursuant to the PDPA and the subsequent amendments to relevant ordinances, within the scope of the following matters: (1) consolidated management on deposit and loan operation for depositor and borrower; (2) credit approval and credit extension business; (3) credit business; (4) credit investigation; (5) bills finance business; (6) debt discount and purchase business; (7) foreign exchange business; (8) credit card, cash card, debit card or electronic value-stored card business; (9) investigation, statistics, research and analysis; (10) account management and debt trading business; (11) consumer, customer management and service; (12) consumer protection; (13) financial service industry's collection and processing of information in accordance with laws and needs for financial supervision; (14) contracts, quasi-contracts or other relevant legal matters; (15) non-government agency collecting or processing personal information under legal obligations; (16) other businesses in accordance with the business registration or organizational by-law; (17) financial dispute resolution; (18) cooperation with domestic and international money laundering measures to combat terrorists and economic sanctions; and (19) prevention of financial crimes and fraud, may collect, process, and use (including international transmission) the following information of the Borrower and its representative and all information between the Borrower and its representative and various agencies: basic identification information, credit investigation report, loan information (including the records of overdue debt, debt collection and bad debt), savings information, financial information and other information regarding properties or real estates, credit information regarding notes, personal credit information, credit information regarding credit cards (including IC cards and magnetic stripe cards), credit information in the contracted merchant of credit card companies, and other information regarding loan and credit transactions. However, each Bank shall be responsible to keep confidence of the aforesaid information obtained due to this Facility pursuant to the Banking Act, the PDPA and other relevant laws.

- 25.2. During the Duration Period of the Facility, the Borrower and its representative may (1) inquire and request for a review of the personal information and make copies, and any necessary fees and costs incurred may be charged by the Banks, Lead Arrangers and Agents according to Article 14 of the PDPA; (2) request to supplement or correct the personal information, to that end a proper explanation is required; or (3) request the data to be deleted, ceased being collected and used. However, if deemed necessary for business operations, such request of the data to be deleted, ceased being collected and used may be denied.
- 25.3. Other than collecting, processing and using (including international transmission) such person information, the Banks may provide various information of the Borrower and its representative under Article 25.1. to the assignees of the Banks, potential assignees, risk sharers, claim appraisers, auditors or other personnel authorized by relevant laws and regulations, Joint Credit Information Center, the Small and Medium Enterprise Credit Guarantee Fund of Taiwan, the Financial Information Service Co., Ltd., Taiwan Clearing House, outsourcing institutions, financial holding companies and subsidiaries (branches) thereof and affiliates of each Bank, persons who propose to merge with the Banks, and other persons who propose to engage in similar transactions with the Banks, investors (or potential investors) of the asset securitization transactions (or transactions with similar economic effects) originated by such Banks, arranger, trustees or other relevant personnel, recipients of personal information via international transmission who have not been restricted by the central competent authority, financial supervisory agencies or agencies with investigation power provided by laws, and other relevant institutions having transactions with the Banks, and the aforementioned institutions may process and use (including international transmission) the information. However, except for Joint Credit Information Center and outsourcing institutions, the remaining institutions shall, prior to the collection, processing, and use (including international transmission) of the personal information of the Borrower and its representative, notify the Borrower and its representative such information's source and the notices to be made under Paragraph 1, Article 8 of the PDPA. The aforesaid personal information is limited to the uses for this Agreement.
- 25.4. The institutions listed in Article 25.3. may collect, process and use (including international transmission) various information of the Borrower and its representative specified in Article 25.1. for certain purposes such as for the needs of the registered businesses items or business stipulated in the articles of incorporation, and may provide the information to the Banks, and the Banks may process and use (including international transmission) the information. Since the Borrower and its representative have already known the contents that each Bank shall notify, the Agents and each Banks are not required to notify for the Banks' process and use (including international transmission) of the personal information of the Borrower or its representative acquired from the aforementioned institutions.

- 25.5. When the Banks intend to sell, assign, share risk or entrust their claims under this Facility to a third party, or intend to engage a third party to carry out a lawsuit, compulsory enforcement or other legal proceedings, the Borrower and its representative agree that the Banks may provide the aforementioned third party and its assignee with the information as contents of the transaction, the status of the repayment and debt collection, credit information and personal data of the Borrower and its representative, and agree that the aforementioned third party and its assignee may collect, process and use (including international transmission) the said information. The said third party and its assignee undertake confidentiality obligations according to the PDPA and relevant laws.

XII. Event of Default and Acceleration

26. Event of Default and Acceleration

- 26.1 The Facility Agent is entitled to suspend the drawdown of this Facility; or, pursuant to the Resolution of the Banks, terminate the entire or partial undrawn amount under the Facility or to accelerate the entire or partial outstanding amount to maturity upon the occurrence of the following events:
- 26.1.1 The Borrower fails to pay the principal, interest, default interest, penalties, compensations, disbursement, Arranger's fee, Agent's fee, commitment fee and any other expenses in accordance with the Agreement within five (5) Bank Business Days after the request by the Facility Agent.
 - 26.1.2 Any representation, warranty, or undertaking made or any information, report or statements provided by the Borrower in this Agreement shall be false, untrue, hidden or omitted; or the Borrower shall violate, fail to comply with or perform any terms, undertakings or conditions set forth in this Agreement; provided, however, for the violation of financial covenants provided in Article 18.1.1 to 18.1.3, the Borrower shall fail to meet the ratios provided in Article 18.1.1 to 18.1.3 for consecutive two years.
 - 26.1.3 The Borrower fails to obtain any approval, consent or license from any regulatory authority that is necessary for the Borrower's business operations, or such approval is subsequently canceled, terminated, revoked, rescinded, repealed or abolished, and it could be reasonably expect that the aforementioned events may cause material adverse effect on the Borrower's ability to perform the obligations under this Agreement and other relevant agreements.
 - 26.1.4 Any negotiable instrument issued by the Borrower is dishonored, or any of them is rejected by a clearing house, or the payment by the Borrower of its debts owed to financial institutions has been delayed, which may have a material adverse impact on the Borrower's ability to perform its obligations hereunder.

- 26.1.5 The Borrower has failed to perform a contract with a third party or discharge its debts to a third party or has materially breached an agreement (including but not limited any cross-default caused by direct or contingent liabilities) and the aforesaid dispute is over the amount of NT\$500 million (NT\$500,000,000) or its equivalent, and the third party creditor of the Borrower has declared to accelerate the entire or partial outstanding amount to maturity, which shall materially affect the Borrower's ability in performing the obligations under this Agreement. Provided, however, the above shall not apply if there is still a dispute over whether the Borrower has constituted a breach and that the Borrower has underwent the necessary legal proceedings or escrow the money and the Resolution of the Banks has resolved that there is no material adverse effect on the Borrower's finances, operational capacity, or the Borrower's ability to perform its obligations under this Agreement, the security documents to which the Borrower is a party and other relevant documents.
- 26.1.6 The Borrower shall be subject to compulsory execution, provisional seizure, provisional measures, unfavorable judgment, or administrative act, administrative enforcement, restriction on registration, expropriation, frozen or forfeiture of properties that involve more than NT\$200 million (NT\$200,000,000), and the Borrower is not able to exclude such situation within thirty (30) calendar days, which is deemed to adversely affect the Borrower's ability to perform this Agreement by the Resolution of the Banks.
- 26.1.7 The Borrower shall apply for, or be applied involving the settlement or bankruptcy under the Bankruptcy Act, reorganization under the Company Act, or the Borrower has applied for a bail-out program, undergoes the procedure of dissolution, liquidation, suspension of business or other similar legal procedures or disputes that may have material adverse effects on the financial condition, business operation and property of the Borrower; or the Borrower shall be the dissolving company upon being merged by another company, or has stated in writing to any Bank that it is unable to pay off the debts by expiration date.
- 26.1.8 The Borrower shall fail to utilize the facility in compliance with the funding purposes of this Agreement or misappropriate the funds.
- 26.1.9 There shall be any material adverse change in the financial conditions, major shareholder who executes the Borrower's business, management structure or business operation of the Borrower and is deemed to adversely affect the Borrower's ability to perform this Agreement by the Resolution of the Banks.
- 26.1.10 The Borrower shall have violated any arrangement other than those set forth in Article 26.1.1 to 26.1.9, which is deemed material, and will materially affect the Borrower's ability to perform this Agreement by the Resolution of the Banks.

- 26.2. If any event set forth in Articles 26.1.1. to 26.1.10. occurs, and that the Facility Agent, based on the Resolutions of the Banks, declares to accelerate the entire or partial outstanding amount to maturity, the Borrower shall pay off the principal, interest, default interest, penalties and expenses immediately. If the Borrower fails to pay off the debt immediately, the Agents have the right, or may be authorized by the Resolutions of the Banks, to exercise each security rights in rem or claim any other rights provided by the law (including but not limited to the rights conferred to each Bank or the Agents, which are prescribed under the law, this Agreement or relevant documents), or exercise the rights under the Promissory Notes according to this Agreement, and request the Borrower to make payments. Except in cases where a court has ruled against the Facility Agent or the Banks, such request for payments to be borne by the Borrower include but are not limited to necessary expenses, such as reasonable attorney's fees, hearing fees, expenses for obtaining a writ of execution, enforcement fees, expenses for distribution participation, arbitration fees, and expenses arising from signing agreements in case sustained or out-of-court settlement and other advances. However, the aforementioned provision shall not be applicable where a court's judgment renders the Facility Agent or the Banks liable for such fees.
- 26.3. If the Facility Agent has notified to suspend the Borrower's right to drawdown under the Facility pursuant to Article 26.1., the Facility Agent shall notify the Borrower to resume the drawdown after the Borrower has proved, and the Resolution has resolved, that the event for the suspension of drawdown has diminished.
- 26.4. Unless otherwise provided in this Agreement, the remaining clauses continue to be in effect during the period that the drawdown is suspended pursuant to Article 26.1.
- 26.5. Unless otherwise provided in this Agreement, whether an event of default existed or exists shall be determined by the Facility Agent; provided, however, that if the Facility Agent deems necessary, it may convene a Banks' meeting to resolve.

XIII. Set-off and Discharge

27. Set-off and Discharge

Upon the occurrence of the events provided under Articles 26.1.1 to 26.1.10 and upon the acceleration asserted by the Facility Agent based on a Resolution of the Banks, the Borrower agrees to immediately repay all the outstanding amounts, including principal, interest, penalty and other relevant fees and expenses and further agrees the following:

- 27.1. Set-off:

- 27.1.1. The Borrower agrees that each Bank may exercise the right of set-off against any deposit the Borrower placed with the Bank (including the head office and any branch) and all its rights against the Bank even if not at the same type or not due, but shall have been deemed due. If the Borrower's deposit is a time deposit, even if the deposit is not due, each Bank and the Facility Agent may terminate the deposit agreement in advance and the debt under the Agreement may be offset by such deposit. If the Borrower has other rights over the aforementioned deposits (including time deposits) and creditor's rights that the Borrower may claim against any Bank, such rights are not affected by the aforementioned offset. If the Borrower has deposited certain property at any Bank, or the Bank subsequently receives any payments on the Borrower's behalf, or deposits such amount to the account opened by the Borrower at the Bank, each Bank has the right to offset, retain and merger such amount. However, if any third party creditor exercises provisional attachment, provisional execution or compulsory enforcement or other similar legal procedures upon the Borrower's deposits at the Bank or other claims, without the needs of notification or demand made by the Facility Agent or any Resolution of the Banks, each Bank has the right to claim the amount due and to exercise the right to have the outstanding principle under the Facility offset by an amount equivalent to the actual amount that the aforementioned compulsory execution or procedures of similar effect is executed upon. The Banks that have exercised offset shall notify the Facility Agent and Borrower in writing once the offset is made. Unless other provisions under this Agreement are applicable, the said acceleration of the entire or partial outstanding amount to maturity shall not constitute an event of default under Article 26 of the Agreement.
- 27.1.2. In the case of a checking deposit, the Borrower acknowledges and agrees that each Bank may in its check deposit agreement set out the condition subsequent to be the acceleration of the Facility. In the event that the condition subsequent is fulfilled, the aforementioned checking deposit agreement shall cease to be valid and the Bank shall immediately return the balance of such checking account and claim the offset on such balance against all indebtedness of the Borrower payable to the Banks hereunder and notify the Borrower and the Facility Agent accordingly, in addition to such Bank's notification to the Borrower of termination of the check deposit agreement and exercise of set-off. If the deposit and the claim are in different currencies, the debt shall be offset after the conversion, which is calculated according to each listed currency's reference rate of the Bank exercising the right to offset debts at the time of the offset.

- 27.1.3. When the Borrower has received or is deemed to have received the notice of set-off from any of the Banks in accordance with Articles 27.1.1 to 27.1.2, the set-off shall become retroactively effective from the time such Bank may exercise its right of set-off; at the same time, the deposit certificate, passbook or other certificate of deposit of the Borrower shall become invalidated within the amount being offset.
- 27.1.4. If the Borrower exercise its right of set-off pursuant to the laws against any of the Banks, only the outstanding principal balance allocated to such Bank may be offset.

27.2. Discharge:

During the Facility Period, if the amounts received as a result of the exercise of the relevant rights under this Agreement, whether by disposing the Collateral or payment received in any other way, are insufficient to fully settle all indebtedness of the Borrower, the orders of discharge made by the Facility Agent among the indebtedness shall be as follows:

- 27.2.1. Any expenses which shall be paid to the Agents for the execution of rights under this Agreement and other related documents (including but not limited to the Agent's Fee payable to the Agents), but unpaid by the Borrower or the Bank.
- 27.2.2. The principals, interest, default interest, penalties, and expenses that the Borrower is required to pay to the Bank under this Agreement but unpaid.
- 27.2.3. According to the nature of each payment, and pursuant to relevant provisions under this Agreement (if it is not explicitly stipulated in this Agreement, the Facility Agent shall make the decision), the allocation shall be made based on the Risk Participation Percentage.
- 27.2.4. If the natures of several debts are contrasting, the Facility Agent shall decide on the method and the order of the discharge, and the allocation shall be made based on the Risk Participation Percentage.

XIV. Relationship Between Borrower and Banks

28. Relationship Between Borrower and Banks

- 28.1 The Borrower may not assign all or partial of its rights or obligations hereunder.
- 28.2 No failure or delay by Arranger, Agents, or any Bank in exercising any right or remedy shall operate as a waiver or estoppels of any right, remedy or condition. Arranger, Agents, or any Bank exercises part of the right or makes partial claim does not constitute a waiver of other right or claim under the Agreement.

XV. Appointment of Agents and Related Provisions

29. Appointment of Agents

- 29.1 The Banks jointly appoint the Agents to act as agents as herein specified and authorize the Agents to take such action on their behalves under the provisions of this Agreement and any security instruments referred to herein and to exercise such rights, powers and discretions hereunder as are specifically delegated to the Agents and such rights, powers and discretions as are reasonably incidental thereto. Each Bank shall not revoke or withdraw the forgoing rights, powers and discretions.
- 29.2 In performing their functions and duties hereunder, the Agents shall act as the agents of the Banks solely for the convenience of the administrative management and shall not be the trustees of the Banks or have any trust relationship with the Banks, nor the agents or trustees of the Borrower.
- 29.3 The Agents may carry out any of their duties hereunder through their personnel.
- 29.4 The fees, costs and expenses (including, without limitation, attorney's fees, out-of-pocket expenses) incurred by the actions taken by the Agents for the interests of the Banks shall be borne by the Banks pursuant to the Risk Participation Percentage. The Banks shall make advance payment or provide surety to the Agents, otherwise the Agents are not obliged to take any action on their own or pursuant to the Resolution of the Banks; provided, however, the above provision is not applicable to any security measure taken to secure the claims.

30. Duties of Agents

- 30.1 The Facility Agent shall act in accordance with the Risk Participation Percentage to manage the Facility and the matters relating to the Banks. In the event that after the Facility Agent's calculation, the Agent is unable to distribute in accordance with the Risk Participation Percentage, the Agent may, based on its reasonable determination, conduct the distribution, and the Banks shall raise no objections.
- 30.2 According to the provisions hereunder, the Facility Agent shall distribute all the amounts collected from the Borrower and the amounts relating to the Facility to each Bank in accordance with the Risk Participation Percentage.
- 30.3 Unless otherwise provided in the Agreement, the Facility Agent shall take actions or inactions pursuant to the Resolution of the Banks. Such actions or inactions are binding upon the Banks as a whole.
- 30.4 Unless otherwise provided in the Agreement, the communication of the Facility Agent relating to its management hereunder may be carried out via fax or electronic mail.
- 30.5 The Agents shall not act against the instruction made by the Resolution of the Banks. The Agents shall take legal actions in accordance with the said Resolutions, the Agreement and the applicable laws. The Agents shall not be held liable to the Borrower or any Bank for actions taken in accordance with the Resolutions of the Banks.

- 30.6 In the event that the Agents deem that an action might constitute the violation of applicable laws and regulations, the Agents may refuse to take such action. In the event that the Agents deem that an action is required in accordance with the applicable laws and regulations, the Agents may take such action.
- 30.7 The Facility Agent shall immediately forward any written notification, received from the Borrower or related obligors pursuant to the Agreement, to each Bank. Aside from the notifications, reports or other documents that is required to be delivered by the Facility Agent to each Bank pursuant to the Agreement, the Facility Agent is not obliged to provide each Bank with any other information relating to the Borrower's credit or financial condition held by the Facility Agent. Nonetheless, each Bank may from time to time retrieve the information at the Facility Agent relating to the Facility.
- 30.8 Unless otherwise provided in the Agreement or the Resolution of the Banks, the Facility Agent is not under any obligation to initiate any litigations or proceed with any recovery procedure against the Borrower or any third party in respect of the Agreement or other relevant agreements or documents. The Agent shall be liable to other Banks if such Agent has any willful misconduct or gross negligence when it undertakes any proceeding to secure the claims.
- 30.9 The Agents are not obliged to conduct verification or investigation on the Event of Default. Prior to the receipt of the written notification from the Banks or the Borrower, the Agents may assume that there is no occurrence of Event of Default or potential Event of Default and assume that each party hereunder does not breach the duties stipulated in the Agreement or any other security instruments. The forgoing does not apply where the Agents are aware of the occurrence of Event of Default.

31. Disclaimers of Officers of the Agents to Banks

- 31.1 Unless otherwise provided in this Agreement, the Officers of the Agents are not responsible for the matters as follows to the Banks:
- 31.1.1 The liability attributed by the Borrower's or any other parties' non-performance or breach of the duties prescribed in the Agreement or any security instruments.
- 31.1.2 The authorization, execution, legitimacy, legal effect, enforceability, authenticity or adequacy of the Agreement, any security instruments or other documents relating to the Facility; or the representations and warranties and the accuracy thereof in the Agreement or any security instruments or other documents related thereto; or the accuracy and entirety of any information provided by any person, regardless of whether such information is received from the Agents.

- 31.1.3 The accuracy and accountability of the Borrower's information, i.e., the credit, financial conditions, revenue forecast, statement, and report; or whether the Agreement is sufficient to secure the claims; or any information provided relating to the financial, credit or other status of the Borrower or any other parties.
 - 31.1.4 The amount that the Facility Agent receives for its own to reimburse the expenses and out-of-pocket expenses relating to the Agreement; or any interests (except those received for the Banks' interests) that the Agents receive, for the Borrower or other parties in the security instruments, from the present and future transaction or other relationship with other Banks irrelevant to the Agreement.
 - 31.1.5 Whether any payments in the Agreement or the security instruments are paid up in full.
 - 31.1.6 For the purpose of the Agents' performance of their duties to retain professionals, e.g., consultants, attorneys, accountants, or agents, which was based on the Agents' determination in good faith.
- 31.2 The foregoing provisions from Article 31.1.1 to 31.1.6 apply to the successor Agents and the personnel thereof appointed in accordance with Article 35.3.

32. Disclaimers of Officers of the Agents to Borrower

The Officers of the Agents are not responsible to the Borrower for the non-performance or breach of the duties prescribed in the Agreement or any security instruments by any Bank or any other parties.

33. Responsibility and Compensation of the Agents

- 33.1 The Agents shall be responsible to the Banks for their willful misconduct or gross negligence in respect of the Agreement.
- 33.2 Unless it is attributable to the Agents' willful misconduct or gross negligence, the Banks agree to, in accordance with their respective Risk Participation Percentage, indemnify the Agents in their capacity (to the extent not reimbursed by the Borrower under the Agreement), from and against any and all demands, claims, damages, penalties, losses, costs, expenses or disbursements of any kind whatsoever (including but not limited to attorney's fees or any disbursement) which may at any time be imposed on, incurred by or asserted against the Agents in any way relating to any legal action or inaction of the Agents under or in connection with the Agreement or other security documents, or in connection with securing or exercising the rights of the Banks or any rights under the Facility. After the Banks indemnify the Agents, the Facility Agent shall claim against the Borrower on behalf of the Banks.

34. Priority of Agents' Fee

For the purpose of smooth performance of the Agent's function hereunder, the Agents shall have a priority claim over the payment received from the Borrower if the Borrower fails to pay the Agents' Fee to the Agents in accordance with Article 10.1 above.

35. Resignation of Agents

- 35.1 Any of the Agents may at any time resign as agents by notifying the Banks and Borrower in writing sixty (60) calendar days prior to the resignation.
- 35.2 The Agents shall convene a Banks' meeting to designate their successor. In any event the Banks fail to designate such successor within sixty (60) calendar days after the Agents' resignation, the resigning Agents may designate their successor on behalf of the Banks. The designation shall take effect upon the successor's acceptance.
- 35.3 Upon the acceptance of the designation, the successor shall assume the rights and obligations of the resigning Agents under this Agreement and the rights, obligations and relevant authority of the resigning Agents hereunder shall be terminated.
- 35.4 The Agent's Fee received by the resigning Agents shall be handed over to their successors on a pro-rata basis as from the effective date of the resignation. The parties of this Agreement agree to execute any documents necessary to replace the Agents, provided that, any cost incurred therefrom shall be borne by the Borrower.

XVI. Rights and Obligations Among Banks

36. Joint and Several Claims

- 36.1 The Banks and the Agents shall be deemed joint and several creditors with respect to the claims under the Agreement.
- 36.2 The Agents representing each Bank, in their capacity, shall be entitled to, in its own name, pursue all the indebtedness under the Agreement payable by the Borrower to the Banks and to enforce all the indebtedness.
- 36.3 Each claim that the Banks and the Facility Agent is entitled to pursue against the Borrower and each related debtor under the Agreement shall be the joint and several claims stipulated in Article 283 of the R.O.C. Civil Code. The Banks hereby agree the following, which shall not be withdrawn, cancelled or by any means invalidated:
 - 36.3.1 Under the Agreement, the Agents are authorized to exercise claims and rights. Unless authorized by the Resolution adopted unanimously by the Banks, each Bank shall not act alone to pursue the joint and several claims against the Borrower or the related debtors or to take any action, nor does each bank take any actions or inactions in conflict with or inconsistent with the Resolution adopted by the Banks. However, this provision does not apply where the rights of set-off or lien, or merger of rights are asserted.

36.3.2 Each Bank shall share the risk under this Facility pursuant to the Risk Participation Percentage. The amount of the payment made pursuant to the Agreement (including, without limitation, due to exercise of set-off, lien or merger of rights) shall be shared by each Bank in accordance with the Risk Participation Percentage. However, if the determination of the Risk Participation Percentage is affected by other circumstances, a Resolution shall be adopted.

36.4 In the event that the set-off, lien or the merger of rights occurs between one Bank, and the Borrower and the related debtors, and in the event that such Bank intends to enforce the joint and several claims under this Facility, within the amount being offset, retained or merged under this Facility, such Bank is compensated only to the extent of its Risk Participation Percentage and the remainder of the said amount shall be deemed as the payment to the rest of the Banks. Within three (3) Bank Business Days after the set-off, retention or merger of rights, such Bank, deducting the amount which such Bank is entitled to, shall pay the remainder of the amount to the Facility Agent for it to distribute to other Banks in accordance with the Risk Participation Percentage.

36.5 An act resulting from any breach of the provisions in the preceding paragraph by any Bank has no legal effect and shall not be used against other Banks.

37. Banks' Resolution and Amendment of Agreement Executed by Facility Agent

37.1 Except provided in this Agreement, the following shall be resolved unanimously by the Banks:

37.1.1 Change to the facility amount.

37.1.2 Change to the Facility Period, purpose or repayment date.

37.1.3 Change to the interest rate of the loan.

37.1.4 Extension of due date(s).

37.1.5 Settlement or conciliation in connection with the rights and obligations under the Facility.

37.1.6 Cancellation, in whole or in part, of the registration of the Collateral.

37.1.7 Change to the definitions under Article 1.13, matters to be resolved by the Resolution of the Banks as set forth in this Article 37, and other matters to be resolved unanimously by the Banks as set forth in this Agreement.

- 37.2 Other than as prescribed in Articles 37.1.1 to 37.1.7 or otherwise prescribed herein, any other matters to be resolved by the Resolution of the Banks shall be adopted by the Majority Resolution.
- 37.3 If an amendment to the Agreement is required for the matters to be resolved by the Resolution of the Banks, after the Banks have agreed on the content of such amendment, the Banks hereby authorize the Facility Agent to execute, on behalf of the Banks, such amendment with the Borrower, such agreement shall have binding effect upon each and every Bank, provided that the Facility Agent shall provide an executed copy of such amendment to the Banks respectively for their record.

38. Banks' Meeting

- 38.1 Any of the Banks may make written request to the Facility Agent to convene a Banks' meeting to discuss the Borrower's default or other issues relating to the Agreement; however, a Banks' meeting may be not convened if the Facility Agent has consulted with other Banks upon such request and a Resolution has resolved that it is not necessary to convene a Banks' meeting. Notwithstanding the above, the Facility Agent may convene the Banks' meeting from time to time when it deems necessary.
- 38.2 When a Banks' meeting is convened in accordance with Article 38.1 above, the Facility Agent shall issue a meeting notice and agenda at least five (5) Bank Business Days prior to the date of Banks' meeting, and hold the meeting accordingly.

39. Severability of Banks' Liability

- 39.1 The liability of the Banks under the Agreement is severable liability. The risks and benefits hereunder shall be proportionally shared by all the Banks in accordance with the Risk Participation Percentage.
- 39.2 Any Bank's failure to perform under this Agreement does not discharge other Banks, Facility Agent or Borrower from its respective obligations under the Agreement; yet none of the Banks or the Agents shall be responsible for the liability of other Banks.

40. Assignment of Rights and Obligations of Banks

Upon the execution of the Agreement, each of the Banks may transfer, assign or grant participations in its rights, benefits or obligations hereunder subject to the following:

- 40.1 Each Bank may, without consent of the Borrower, assign all or a part of its rights or obligations hereunder to a third party (for partial transfer, it should be transferred according to the ratio of Facility Amount of Tranche A Facility and Tranche B Facility); provided, however, such assignment shall not cause any increase of the costs or taxes or the obligations of the Borrower hereunder.

- 40.2 Each Bank shall enter into an Assignment Agreement (in the form of Exhibit 15) and shall issue a Notice of Assignment (in the form of Exhibit 16) within ten (10) Banking Business Days upon the execution of the Assignment Agreement notifying the Borrower and the Facility Agent. The assignee shall be bound by this Agreement. The assigning Bank shall pay the Facility Agent an operation fee of NT\$100 thousand (NT\$100,000) unless such assignment is made due to the merge, spin-off, general assignment, other similar event or the compliance of laws, or such assumption of Commitment or transfer of right is approved by the competent authorities.
- 40.3 Each Bank may, without notice to the Borrower, enter into a risk participation agreement with any third party with respect to its rights and obligations hereunder; provided, however, that such party participating the risk shall not enjoy a voting right in connection with this Facility nor be entitled to claim against the Borrower based on the risk participation agreement or this Agreement, and such risk participation arrangement shall not cause any increase of the costs or taxes or the obligations of the Borrower hereunder.
- 40.4 For the purpose of assignment, the assigning Bank may disclose any information to any potential or actual assignee, the appraisal auditors and the relevant consultants. Such Bank shall provide the Facility Agent with a confidentiality agreement signed by the said assignee, appraisal auditors and relevant consultants. The Bank shall indemnify the Borrower for the damage it suffered due to the Bank's disclosure of confidential information in violation of the preceding provision.
- 40.5 This Agreement shall be binding to the assignee, successor or the party assigned or succeeded the rights or obligations of the assigning Bank hereunder pursuant to other laws or regulations.

41. Acknowledgment and Consent of Banks

Each Bank hereby acknowledges and agrees to the Arrangers and the Agents as follows:

- 41.1 Each Bank does not rely upon the Arrangers and any personnel of the Agents and does, with its sole responsibility from the inception (and still continuing in the future), on its own conduct analysis and investigation on the status quo, credit, prospect, business, operation, assets and financial condition of the Borrower and other related parties; on its own comply with all the laws and regulations applicable to the financial institutions relating to the Agreement; and on its own determine whether to proceed with the Facility or whether to take actions or inactions relating to the Facility.
- 41.2 Each Bank does not rely upon any representations or statements of the Arrangers and the Agents for the purpose of facilitation of each Bank's execution of the Agreement.

XVII. Governing Law and Jurisdiction

42. Governing Law

This Agreement shall be governed by and construed in accordance with the laws of the R.O.C.

43. Jurisdiction

The parties hereto agree to submit to the jurisdiction of the Taiwan Hsinchu District Court for the first instance with respect to any dispute or legal actions arising from or relating to the Agreement, save for any case where an applicable exclusive jurisdiction is provided by law.

XVIII. Miscellaneous

44. Change of Laws or Circumstances

- 44.1 In the event that any restriction in the R.O.C. laws (including but not limited to laws, regulatory rules or ruling letters), any change to the interpretation of laws or any instruction or request made by the competent authority, or change of circumstance, shall make the whole or a portion of the Agreement invalid, and make it illegal for any Bank to give effect to its obligations to commit or maintain its commitment hereunder, the affected Bank shall immediately notify the Facility Agent in writing, and (1) the affected Bank may suspend its Commitment Amount before such illegality ceases to exist (however, if such event no longer exists before the expiry of the drawdown period, the Bank shall still provide its loan); and (2) the Commitment Percentage of other Banks shall remain unchanged.
- 44.2 If the event set forth in Article 44.1 is attributable to the affected Bank, such Bank shall arrange another loan facility for the Borrower in equivalent terms and conditions compared to the Facility and no other Banks shall be held responsible therefore. Such Bank shall compensate the Borrower for any damage it suffers due to the Bank's failure to provide facilities hereunder, including but not limited to the increment of cost and expenses in procuring relevant funding at a rate higher than the interest/fee rate hereunder. However, the Borrower shall provide explanation of such damage and expenses incurred.
- 44.3 If the event set forth in Article 44.1 is not attributable to the affected Bank, such Bank shall, with reasonable effort, assist the Borrower to obtain alternative loan facility from other banks to the extent permitted by laws. However, the Banks shall not be responsible for the availability of the alternative loan facility, and the Commitment Percentage of other Banks shall remain unchanged.

45. Notification and Request

All notices hereunder may be given via fax and electronic mail unless otherwise required by the Agreement to be in writing by post.

46. Delivery

All notices made hereunder shall be deemed to have been given, at the time of the delivery if delivered in person; or at the time of sending out with a confirmation received if delivered by fax; or at the time of acknowledging receipt if delivered by registered mail to the address set forth in the Agreement; or at the time of sending out with a confirmation received if delivered by electronic mail.

47. Change in Notification Address and Methods

The Facility Agent and other Banks shall be notified promptly of any changes to the notification address or methods of the Borrower, and a Bank shall notify the Borrower and other Banks any changes to the notification address and methods of such Bank. In any event that any parties fail to notify respective party of the change of notification address or method, the notice may be given by the methods and to the address set forth in the Agreement or last known to the sender.

48. Superseding Effect

This Agreement is the sole agreement among the parties of this Agreement that supersedes any and all oral communication or written commitment or promises among the parties of this Agreement prior to the effective date of this Agreement. Unless otherwise provided hereunder, any amendment shall be made in writing to be effective; provided, however, as for the matters among the Facility Agent and the Banks which are not directly relating to the Borrower, an amendment may be made in writing upon the consent by the Facility Agent and the Banks without a need to obtain the consent from the Borrower; the Facility Agent, however, shall notify the Borrower in writing thereafter.

49. Headings

The headings in this Agreement are for convenience of reference only and shall not affect the construction hereof.

50. Counterparts

This Agreement shall be executed in twelve (12) originals and three (3) extra counterparts. Each of the originals and the counterparts when fully executed, will be considered an original. Each party of the Agreement shall keep one (1) original respectively; the Facility Agent shall take two (2) counterparts, and the lawyer of the Banks shall keep one (1) counterpart.

51. Effective Date

The Agreement is fully reviewed within reasonable period of time and is understood by the parties of the Agreement before it execution. After the execution of the Agreement, the same will take effect on May 15, 2018 (“Effective Date”). The Effective Date applies to the parties which execute the Agreement on a later date.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date and year first above written.

Borrower:

ChipMOS TECHNOLOGIES INC.

Representative: Chairman Shih-Jye Cheng

VAT number: 16130042

Address: No.1, R&D Road 1, Baoshan Township, Hsinchu Science Park, Hsinchu County

Lead Arranger, Facility Agent and Bank:

Taiwan Cooperative Bank Co., Ltd.

Authorized signature:

Representative:

Agent:

Address:

Lead Arranger, Collateral Agent and Bank:

Bank of Taiwan Co., Ltd.

Authorized signature:

Representative:

Agent:

Address:

Lead Arranger and Bank:

Land Bank of Taiwan Co., Ltd.

Authorized signature:

Representative:

Agent:

Address:

Lead Arranger and Bank:

Taishin International Bank Co., Ltd.

Authorized signature:

Representative:

Agent:

Address:

Lead Arranger and Bank:

Hua Nan Commercial Bank, Ltd.

Authorized signature:

Representative:

Agent:

Address:

Lead Arranger and Bank:

Chang Hwa Commercial Bank Co., Ltd.

Authorized signature:

Representative:

Agent:

Address:

Lead Arranger and Bank:

Yuanta Commercial Bank Co., Ltd.

Authorized signature:

Representative:

Agent:

Address:

Lead Arranger and Bank:

First Commercial Bank Co., Ltd.

Authorized signature:

Representative:

Agent:

Address:

Bank:

Taiwan Shin Kong Commercial Bank Co., Ltd.

Authorized signature:

Representative:

Agent:

Address:

Bank:

Bank of Panhsin Co., Ltd.

Authorized signature:

Representative:

Agent:

Address:

Bank:

Mega International Commercial Bank Co., Ltd.

Authorized signature:

Representative:

Agent:

Address:

Schedule 1: List of Contacts**List of Contacts**

<u>Name of Party</u>	<u>Telephone Number</u>	<u>Facsimile</u>	<u>Contact person and email address</u>	<u>Account and Account Number</u>
ChipMOS TECHNOLOGIES INC.				
Taiwan Cooperative Bank Co., Ltd.				Bank: Account Name: Account No.:
Bank of Taiwan Co., Ltd.				Bank: Account Name: Account No.:
Land Bank of Taiwan Co., Ltd.				Bank: Account Name: Account No.:
Taishin International Bank Co., Ltd.				Bank: Account Name: Account No.:
Hua Nan Commercial Bank, Ltd.				Bank: Account Name: Account No.:
Chang Hwa Commercial Bank Co., Ltd.				Bank: Account Name: Account No.:
Yuanta Commercial Bank Co., Ltd.				Bank: Account Name: Account No.:
First Commercial Bank Co., Ltd.				Bank: Account Name: Account No.:
Taiwan Shin Kong Commercial Bank Co., Ltd.				Bank: Account Name: Account No.:
Bank of Panhsin Co., Ltd.				Bank: Account Name: Account No.:
Mega International Commercial Bank Co., Ltd.				Bank: Account Name: Account No.:

Schedule 2: Commitment Amount and Commitment Percentage of Each Bank

Commitment Amount and Commitment Percentage of Each Bank

<u>Lead Arrangers or Banks</u>	<u>Banks</u>	<u>Aggregate Commitment Amount (in thousand New Taiwan Dollar)</u>	<u>Commitment Amount for each Tranche (in thousand New Taiwan Dollar)</u>	<u>Commitment Percentage for each Tranche</u>	<u>Commitment Percentage (in %, approximately)</u>
Lead Arranger, Facility Agent and Bank	Taiwan Cooperative Bank Co., Ltd.	2,000,000	Tranche A Facility: 1,400,000	Tranche A Facility: 16.67%	16.67%
			Tranche B Facility: 600,000	Tranche B Facility: 16.67%	
Lead Arranger, Collateral Agent and Bank	Bank of Taiwan Co., Ltd.	2,000,000	Tranche A Facility: 1,400,000	Tranche A Facility: 16.67%	16.67%
			Tranche B Facility: 600,000	Tranche B Facility: 16.67%	
Lead Arranger and Bank	Land Bank of Taiwan Co., Ltd.	2,000,000	Tranche A Facility: 1,400,000	Tranche A Facility: 16.67%	16.67%
			Tranche B Facility: 600,000	Tranche B Facility: 16.67%	
Lead Arranger and Bank	Taishin International Bank Co., Ltd.	1,200,000	Tranche A Facility: 840,000	Tranche A Facility: 10.00%	10.00%
			Tranche B Facility: 360,000	Tranche B Facility: 10.00%	
Lead Arranger and Bank	Hua Nan Commercial Bank, Ltd.	1,200,000	Tranche A Facility: 840,000	Tranche A Facility: 10.00%	10.00%
			Tranche B Facility: 360,000	Tranche B Facility: 10.00%	
Lead Arranger and Bank	Chang Hwa Commercial Bank Co., Ltd.	1,120,000	Tranche A Facility: 784,000	Tranche A Facility: 9.33%	9.33%
			Tranche B Facility: 336,000	Tranche B Facility: 9.33%	
Lead Arranger and Bank	Yuanta Commercial Bank Co., Ltd.	900,000	Tranche A Facility: 630,000	Tranche A Facility: 7.50%	7.50%
			Tranche B Facility: 270,000	Tranche B Facility: 7.50%	
Bank	First Commercial Bank Co., Ltd.	600,000	Tranche A Facility: 420,000	Tranche A Facility: 5.00%	5.00%
			Tranche B Facility: 180,000	Tranche B Facility: 5.00%	
Bank	Taiwan Shin Kong Commercial Bank Co., Ltd.	450,000	Tranche A Facility: 315,000	Tranche A Facility: 3.75%	3.75%
			Tranche B Facility: 135,000	Tranche B Facility: 3.75%	

Bank	Bank Of Panhsin Co., Ltd.	310,000	Tranche A Facility: 217,000 Tranche B Facility: 93,000	Tranche A Facility: 2.58% Tranche B Facility: 2.58%	2.58%
Bank	Mega International Commercial Bank Co., Ltd.	220,000	Tranche A Facility: 154,000 Tranche B Facility: 66,000	Tranche A Facility: 1.83% Tranche B Facility: 1.83%	1.83%
Total		12,000,000	Tranche A Facility: 8,400,000 Tranche B Facility: 3,600,000	Tranche A Facility: 100.00% Tranche B Facility: 100.00%	100.00%

Schedule 3: Details of Repayment Schedule

Details of Repayment Schedule

In accordance with the Syndicated Loan Agreement (hereinafter the "Agreement") dated May 15, 2018 in the aggregate amount of NT\$12 billion (NT\$12,000,000,000) by and among ChipMOS TECHNOLOGIES INC. (hereinafter the "Company"), your Bank as Facility Agent and such other Banks named therein, the Company hereby provides the details of repayment schedule as follows:

<u>Existing indebtedness to be repaid or name of creditor</u>	<u>Outstanding principal balance (NT\$)</u>	<u>Principal to be repaid on [Date] (NT\$)</u>	<u>Designated account name and no. for repayment</u>
---------------------------------------------------------------	---------------------------------------------	------------------------------------------------	------------------------------------------------------

To:
Facility Agent: Taiwan Cooperative Bank Co., Ltd.

By: ChipMOS TECHNOLOGIES INC.
Representative: Chairman Shih-Jye Cheng
VAT number: 16130042
Address: No.1, R&D Road 1, Baoshan Township, Hsinchu Science Park, Hsinchu County

Date:

Exhibit 1: Specimen Chops and/or Signature of Borrower

Specimen Chops and/or Signature of Borrower

- I. In accordance with the Syndicated Loan Agreement (hereinafter the "Agreement") dated May 15, 2018 in the aggregate amount of NT\$12 billion (NT\$12,000,000,000) by and among ChipMOS TECHNOLOGIES INC. (hereinafter the "Company"), your Banks (as the Facility Agent and Collateral Agent, respectively) and such other Banks named therein, the Company has issued this Specimen Chops and/or Signature of Borrower.
- II. The Undersigned hereby acknowledges and certifies that the following chops and/or signatures are duly authorized chops and/or signatures, which, individually or jointly, shall be effective to the Undersigned in respect of any documents or actions pursuant to the Agreement. The specimen chops and/or signatures are as follows (in specimens) and shall be effective to the Undersigned upon providing specimens.

III.

1. Chops and/or signature: Specimen No. 1

Name:

Title:

Chops and/or signature:

2. Chops and/or signature: Specimen No. 2

Name:

Title:

Chops and/or signature:

To:

Facility Agent: Taiwan Cooperative Bank Co., Ltd.

Collateral Bank: Bank of Taiwan Co., Ltd.

By:

Representative:

VAT number:

Address:

ChipMOS TECHNOLOGIES INC.

Chairman Shih-Jye Cheng

16130042

No.1, R&D Road 1, Baoshan Township, Hsinchu
Science Park, Hsinchu County

Date:

Exhibit 3: Note Authorization

Note Authorization

In accordance with the Syndicated Loan Agreement (hereinafter the "Agreement") dated May 15, 2018 in the aggregate amount of NT\$12 billion (NT\$12,000,000,000) by and among ChipMOS TECHNOLOGIES INC. (hereinafter the "Undersigned"), your Bank as Facility Agent and such other Banks named therein, the Undersigned hereby deposits a Promissory Note pursuant to the Agreement in the amount of NT\$12 billion (NT\$12,000,000,000) to your Bank for you to retain.

The Undersigned hereby irrevocably and specifically authorizes and empowers your Bank, in your capacity as the Facility Agent and joint and several creditors under the Agreement and for the benefit of the Banks, to exercise the rights under the Promissory Note and its replacement or substitution, at any time after the occurrence of an Event of Default as provided in Article 26.1.1 to 26.1.10 which declared by your Bank in accordance with Article 26.2 of the Agreement by accelerating any or all of the interests and principal under the Agreement to maturity. Your Bank and any of your agents or employees are fully authorized to, for and on behalf of the Banks, complete the Promissory Note and/or any replacement or substitution, as applicable, by inserting therein the maturity date, the interest rate (per annum), and the date from which interest thereon is to accrue all in accordance with the terms of the Agreement. The Undersigned shall not revoke, withdraw, amend, rescind or terminate the above authorization. In case of multiple debts or single debt with various interest rates or amended interest rates, your Bank and any of your agents or employees may fill in the highest interest rate that was agreed upon in said Promissory Notes. In case of multiple debts or single debt with various maturity dates or the dates of interest payments for remaining balances differ, your Bank and any of your agents or employees may fill in the earliest maturity date as the maturity date for such Promissory Note, and exercise the rights under such Promissory Note. However, the accrued interest shall be based on the interest rates agreed upon and the date of accrual for each debt. The Undersigned shall not revoke, withdraw, amend, rescind or terminate the above authorization.

This authorization shall expire on the date that all sums owing under the Agreement have been fully paid.

To:
Facility Agent: Taiwan Cooperative Bank Co., Ltd.

By: ChipMOS TECHNOLOGIES INC.
Representative: Chairman Shih-Jye Cheng
VAT number: 16130042
Address: No.1, R&D Road 1, Baoshan Township, Hsinchu
Science Park, Hsinchu County

Date:

Drawdown and/or Refinance Request

In accordance with the Syndicated Loan Agreement (hereinafter the "Agreement") dated May 15, 2018 in the aggregate amount of NT\$12 billion (NT\$12,000,000,000) by and among ChipMOS TECHNOLOGIES INC. (hereinafter the "Applicant"), your Bank as Facility Agent and such other Banks named therein, the Applicant hereby applies for a drawdown for the following amount:

- Tranche A Facility: NT\$.
Date of advance: MM/DD/YYYY Maturity date: MM/DD/YYYY
- Tranche B Facility: NT\$. Term of facility: days
Date of advance: MM/DD/YYYY Maturity date: MM/DD/YYYY
- Please notify each Bank to disburse funds to the Applicant's account at Hsinchu Branch of Taiwan Cooperative Bank (Account No.: ; Account name:) by MM/DD/YYYY pursuant to the Agreement. Once the money has been remitted to the account, the Applicant is deemed to receive such advance.
- This disbursement is handled through refinancing the repayment of the outstanding principal balance due on MM/DD/YYYY. Once it is showed on the accounts that the debts have been settled, the Applicant is deemed to receive such advance amount, and this Drawdown and/or Refinance Request shall be the proof that each Bank has remitted the advance. Additional fund transfer proceeds are unnecessary.

The Applicant hereby declares and confirms that as of the date that the Applicant has submitted this Request: (1) no event of default under the Agreement has occurred or continues to exist; (2) the representations and warranties under the Agreement remain to be true and correct; (3) all conditions for the drawdown of the facility amount under the Agreement have been fulfilled; (4) the documents provided are true and accurate, and continue to be in effect within the duration of the Agreement and are unchanged, or has completed the notification of the latest change; the performance of the Agreement has not violated the Borrower's contractual agreements with any third party.

The Applicant understands and agrees that the Drawdown and/or Refinance Request shall not be revoked, changed or terminated upon its acceptance by the Facility Agent, and is binding to the Applicant.

To:
Facility Agent: Taiwan Cooperative Bank Co., Ltd.

By: ChipMOS TECHNOLOGIES INC.
Representative: Chairman Shih-Jye Cheng
VAT number: 16130042
Address: No.1, R&D Road 1, Baoshan Township Hsinchu
Science Park, Hsinchu County

Date:

Exhibit 5: Drawdown and/or Refinance Notification

Drawdown and/or Refinance Notification

I. This Drawdown and/or Refinance Notification is handled in accordance with the Drawdown and/or Refinance Request made by ChipMOS TECHNOLOGIES INC. (hereinafter the “Applicant”) on MM/DD/YYYY.

II. Tranche A Facility: in New Taiwan Dollars

Interest rate: Annual Interest Rate at _____ .

<u>Bank</u>	_____	Disbursement Amount	_____	Bank	_____	Disbursement Amount	_____
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III. Tranche B Facility: in New Taiwan Dollars

Interest rate: Annual Interest Rate at _____ .

<u>Bank</u>	_____	Disbursement Amount	_____	Bank	_____	Disbursement Amount	_____
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IV. Each Bank shall complete the following matters by noon of (MM/DD/YYYY) pursuant to the Agreement:

- Remit the disbursement amount to the Borrower’s _____ account at Hsinchu Branch of Taiwan Cooperative Bank (Account No.: _____ ; Account name: _____).
- Complete the refinancing procedures for Tranche B Facility.

To:
Bank:
By:
Facility Agent: Taiwan Cooperative Bank Co., Ltd.
Date:

Negative Pledge Certificate

In accordance with the Syndicated Loan Agreement (hereinafter the “Agreement”) dated May 15, 2018 in the aggregate amount of NT\$12 billion (NT\$12,000,000,000) by and among ChipMOS TECHNOLOGIES INC. (hereinafter the “Company”), your Bank as Facility Agent and such other banks named therein, the Company hereby undertakes as follows:

1. The Company undertakes to create the first priority mortgage with the maximum secured amount over the following properties as Collateral under the Agreement in favor of Bank of Taiwan Co., Ltd., as the Collateral Agent: (1) the three buildings with Building Nos. 13, 29 and 36, Keguan Section, Hsinchu County and with House No. 1, R&D Road 1, Baoshan Township, Hsinchu County, and its ancillary attachments situated thereon (i.e., the Hsinchu Science Park Plant), which are owned by the Company, and located at Lot Nos. 2-2 and 5, Keguan Section, Baoshan Township, Hsinchu County, owned by Hsinchu Science Park Bureau; (2) the six buildings with Building Nos. 1, 2, 3, 4, 612 and 613, Xinke Section, Xhinshr District, Tainan City and with House No. 5, Nanke 7th Road, Xhinshr District, Tainan City, and its ancillary attachments situated thereon, which are owned by the Company, and located at Lot No. 55, Xinke Section, Xhinshr District, Tainan City, owned by Southern Taiwan Science Park Bureau; along with the three buildings, with Building Nos. 130, 145 and 146, Xinke Section, Xhinshr District, Tainan City and with House No. 3, Nanke 7th Road, Xhinshr District, Tainan City, and its ancillary attachments situated thereon, which are owned by the Company, and located at Lot No. 40, Xinke Section, Xhinshr District, Tainan City, owned by Southern Taiwan Science Park Bureau (i.e., the Tainan Plant); (3) the four pieces of land located at Lot Nos. 1072, 1073, 1074 and 1077, Taihe Section, Zhubei City, Hsinchu County, and the three buildings with Building Nos. 251-1, 251-2, and 251-3 and with House No. 37, Xintai Road, Zhubei City, Hsinchu County, and its ancillary attachments situated thereon, which are owned by the Company (i.e., the Zhubei Plant); (4) the two pieces of land located at Lot Nos. 421 and 424, Taihe Section, Zhubei City, Hsinchu County, and the four buildings, with Building Nos. 65-1, 65-2, 65-3 and 65-4 and with House No. 112, Zhonghe St., Zhubei City, Hsinchu County, and its ancillary attachments situated thereon, which are owned by the Company (i.e., the 2nd Zhubei Plant); (5) the two pieces of land located at Chienshing Sub-Land Lot Nos. 18 and 18-1, Chienshing Section, Hukou Township, Hsinchu County, and the two buildings with Building Nos. Chienshing Sub-Land Lot Nos. 1526-1 and 1526-2, Chienshing Section, Hukou Township, Hsinchu County and with House No. 4, Rende Road, Hukou Township, Hsinchu County, and its ancillary attachments situated thereon, which are owned by the Company (i.e., the Hukou Plant); and (6) all machinery and equipment placed in the buildings and its ancillary attachments provided in (1) to (5) above.
2. Unless otherwise provided under the Agreement, the Company undertakes not to create any other mortgage, pledge or other security interest over, or provide similar undertakings with respect to, the Collateral as described above to any third party.

3. If the Company is in breach of the undertakings or take any action impedimental to the undertakings herein, the directors who participated in the decision-making of such breach by the Company and the wrongdoer(s) shall be jointly and severally responsible for compensation of damages resulting therefrom and shall be punished in accordance with the provisions of Article 126 of the Banking Law of the Republic of China.
4. Unless otherwise agreed by your Bank in writing, the Company shall not revoke, withdraw, terminate or rescind this Certificate.
5. The photocopy of the relevant minutes of the Board of Directors of the Company is herewith attached.

Attachment: Photocopy of the minutes of the Board of Directors of the Company

To:

Facility Agent: Taiwan Cooperative Bank Co., Ltd.

By: ChipMOS TECHNOLOGIES INC.

Representative: Chairman Shih-Jye Cheng

VAT number: 16130042

Address: No.1, R&D Road 1, Baoshan Township Hsinchu
Science Park, Hsinchu County

Date:

Land and Building Mortgage Agreement

This Land and Building Mortgage Agreement (hereinafter the “Agreement”) is executed between ChipMOS TECHNOLOGIES INC. (as the debtor and the mortgagor; hereinafter referred to as the “Debtor” or the “Mortgagor”) and Bank of Taiwan Co., Ltd. (in its capacity as a joint and several creditors under Article 283 of the Civil Code and for the joint and several benefits of the Banks under the Syndicated Loan Agreement referred to below; hereinafter referred to as the “Creditor” or the “Mortgagee”).

WHEREAS, the Debtor has executed a Syndicated Loan Agreement (hereinafter the “Syndicated Loan Agreement”) with the Mortgagee and all Banks named therein with a facility amount of NT\$12 billion (NT\$12,000,000,000) on May 15, 2018. To secure the obligations and debts arising from the aforesaid Syndicated Loan Agreement, the Debtor provides the collateral (hereinafter the “Collateral”) as set forth in the mortgage agreement as mortgage with the maximum amount of NT\$ _____ in favor of the Mortgagee. The determination date for the debts secured by the maximum amount mortgage shall be (MM/DD/YYYY).

The Mortgagor hereby agrees to waive all rights under Article 881-7 of the Civil Code and agrees to the following:

1. The scope of the debts secured by maximum amount mortgage:

The Mortgagor hereby agrees that the debts secured by this maximum amount mortgage shall include all current (including those incurred but unpaid) and future debts owed to the Mortgagee under the Syndicated Loan Agreement, including the note obligations incurred by the Debtor to the Banks under the Syndicated Loan Agreement (including those from issuing notes, endorsement of notes, acceptance, note guarantee and other note debts), principal, interest, default interest, penalties, disbursement, arranger’s fee, agent’s fee, commitment fee, compensations, amendment fee, appraisal fee of the Collateral, registration (or registration for the change of rights) fee of the Collateral, insurance premium, expenses for obtaining a writ of execution, expenses for compulsory enforcement, expenses for participation of distribution, other fees or damages due to the failure to perform all the obligations therein.

2. Handled in accordance with the Syndicated Loan Agreement:

The Mortgagee may determine the repayment date for the respective debt secured under this Agreement. The Mortgagee may, in accordance with the Syndicated Loan Agreement, at any time suspend or reduce the drawdown of the facility, or collect the entire or partial advanced amount; the Mortgagee may also, in accordance with the Syndicated Loan Agreement, reduce the facility amount or shorten the facility period, or accelerate the entire or partial outstanding amount to maturity. The Mortgagor shall agree to act as above without any objections.

3. Declaration of the Mortgagor:

The Mortgagor hereby declares that the Mortgagor has the complete and legal rights to the Collateral. Except for those mortgaged (which shall be handled pursuant to the Syndicated Loan Agreement), there is no third party interests, encumbrances, lending, or legal prohibition against seizure, possession, transfer or pledge over the Collateral. The Collateral has not been seized or detained. Should disputes arise because any of the statements above is false or there are flaws in the quality or rights of the Collateral, the Mortgagee may order the Mortgagor to provide other Collateral of equivalent value that is approved by the Mortgagee within a designated period of time, or request the Debtor, and the Debtor shall agree, in addition to paying off all debts within the designated period of time, to indemnify all damage suffered by the Mortgagee.

4. Preservation of the Collateral:

If the Collateral is damaged, diminished, or devaluation, the Mortgagor shall notify the Mortgagee immediately. Regardless of whether the aforesaid circumstances are attributable to the Mortgagor, the Mortgagee may order the Mortgagor to provide other collateral equivalent of diminished value that is approved by the Mortgagee within a designated period of time. In case that the Mortgagor has failed to do so within the designated time, the Mortgagee may request the Mortgagor to pay off all debts immediately. Under the circumstances that the Collateral has not been provided by the Debtor, the Mortgagor, however, is responsible for the Collateral being in the aforesaid state, the Mortgagee may request the Mortgagor to remedy the Collateral to its previous state or provide other Collateral of equivalent diminished value that is approved by the Mortgagee within a designated period of time. Under the circumstances that the Mortgagor is not held responsible, the Mortgagee may request the Mortgagor to provide collateral within the extent of the damage suffered by the Mortgagee. Without the written consent from the Mortgagee, the Mortgagor shall not demolish, alter, or enlarge the Collateral in part or in whole, or conduct any other act that is enough to reduce the value of the Collateral. Provided, however, that the Mortgagee shall not withhold or delay such consent without any legitimate reason. Any tax, maintenance, and other related costs of the Collateral shall be borne by the Mortgagor.

5. Mortgagor's assistance in relevant registrations:

In case that the Collateral is required to be registered for the creation of mortgage or other changes, the Mortgagor shall assist in such matters.

6. Insurance for the Collateral:

With respect to the constructional improvements (including the main construction and additional facilities, hereinafter also referred to as the "Construction") of the Collateral, the Mortgagee shall be the priority loss payee of the insurance for the Construction, or the mortgagee of the insurance policy for the Construction. The Construction shall be insured at an insurance company approved by the Mortgagee under a policy (including but not limited to fire insurance, earthquake insurance and other relevant insurance) that corresponds to the standards of the Debtor's industry pursuant to the Syndicated Loan Agreement. The Mortgagee may notify the Mortgagor to get insured under other policies whenever it deems necessary, and the Mortgagor shall bear all costs incurred. All original copies of the insurance policy and the duplicates of the receipt for premiums shall be delivered to the Mortgagee for retention. The Mortgagee may use this Agreement as authorization to take out or renew the insurance on the Mortgagor's behalf when the Mortgagor fails to do so. Where the Mortgagee has paid for the premiums on the Mortgagor's behalf, the Mortgagor shall repay the fees immediately. Should the Mortgagor fails to do so, the Mortgagee may include such premiums into the amount owned by the Debtor and calculate the interest accrued according to the interest rate under the Syndicated Loan Agreement. However, the Mortgagee is not obliged to take out or renew the insurance or pay premiums on the Mortgagor's behalf. In case that the Collateral is damaged, regardless of the reasons raised by the insurance company for the refusal or delay in the payment of the insurance compensation, or under the circumstances that the insurance compensation is insufficient, the Debtor shall immediately repay the principal, default interest, penalties, compensation and other expenses of the debt, or provide other collateral as approved by the Mortgagee, and shall not use any excuses to evade responsibility. Prior to receiving the insurance compensation, the Debtor shall provide other equivalent collateral as approved by the Mortgagee in favor of the Mortgagee should the Mortgagee deems necessary.

7. Subrogation:

In case that the Mortgagor may receive compensation, indemnification or other interests from a third party due to expropriation of all or partial of the Collateral or for other reasons, the Mortgagee has the right to directly receive such payment on the Mortgagor's behalf, and such payment shall be used to offset both expired and unexpired debt and the Debtor shall not object. This Agreement shall be used as the proof for this authorization.

8. Remainder of the Disposal of Collateral:

The remainder after the proceeds from the disposal of the Collateral has been used to settle all of the Mortgagor's debts and costs shall be returned to the Mortgagor.

9. Scope of Subject Covered By Mortgage:

The mortgage over the Collateral shall cover the land's water rights, garden, trees, chattel attached to said lands or constructions and those buildings without independency and all equipment attached to said buildings (including tap water, gas, electricity, air conditioners or heaters, sanitary equipment, etc.), and other rights, objects, and attachments and parking spaces.

10. Governing Law:

The requisite elements and effect for, and all manners for juridical acts of, the Debtors' debts and obligations to be fulfilled under this Agreement, and the Mortgagee's rights as a secured creditor under this Agreement, shall be governed by the laws of the Republic of China.

11. Place of Performance and Consensual Jurisdiction:

The place of performance for matters stipulated herein shall be the _____ Branch of the Mortgagee. Should there be any legal proceedings due to the Debtor's or the Mortgagor's breach or default, the Mortgagee, the Debtor and the Mortgagor agree that the Taiwan Hsinchu District Court shall be the court of first instance, unless other exclusive jurisdiction applies pursuant to the law.

12. **The Parties' Successors:**
The Debtor referred to herein shall include its successors, assignees, or bankruptcy administrators. If the Mortgagee's representative has changed, the new person assuming such position shall be the representative of the legal entity having rights and obligations hereunder and registration need not to be amended.
13. **Non-waiver:**
Unless otherwise waived by the Mortgagee in writing, the Mortgagee's non-implementation, or delay of implementation, of the authorities, rights or interests under this Agreement or under any documents signed by the Mortgagee and Mortgagor or Debtor, shall not be interpreted that the Mortgagee waives such authorities, rights or interests. If said authorities or rights were exercised only once or partially exercised, there should be no indication that said authorities or rights cannot be exercised again or other parts of the authorities or rights cannot be exercised again.
14. **Matters Not Stipulated:**
Any matters not stipulated herein or in the attachments shall be subject to the laws of the Republic of China.
15. **Interpretation of Headings:**
The headings used in the Agreement are for reference purposes only and should not be the only basis for the interpretation of this Agreement.

Separately Negotiated

1. **The Mortgagor shall bear the fees (including other relevant expenses) incurred for registration of the creation, change and cancellation of mortgage.**
2. **Unless otherwise provided in the Syndicated Loan Agreement, the Mortgagor shall not create any encumbrances upon the Collateral without obtaining the Mortgagee's prior approval in writing. Should the Mortgagor breaches the aforesaid covenant, the Mortgagee may request the Mortgagor to provide other collateral of equivalent value that is approved by the Mortgagee within a designated period of time, or request the Debtor, in addition to paying off all debts within the designated period of time, to indemnify all damage suffered by the Mortgagee.**

The Debtor has fully understood and agreed to the contents of the above two separately negotiated provisions.

Statement:

The Debtor hereby states that it has reviewed the contents of all the above provisions within a reasonable period, and the Agreement shall have binding effect on the Creditor.

This Land and Building Mortgage Agreement is executed by:

The Creditor and the Mortgagee:

Representative:

Address:

Agent:

Address:

The Debtor and the Mortgagor: ChipMOS TECHNOLOGIES INC.

Representative: Chairman Shih-Jye Cheng

VAT number: 16130042

Address: No.1, R&D Road 1, Baoshan Township, Hsinchu Science Park, Hsinchu County

Date:

Building Mortgage Agreement

This Building Mortgage Agreement (the “Agreement”) is executed between ChipMOS TECHNOLOGIES INC. (as the debtor and the mortgagor; hereinafter referred to as the “Debtor” or the “Mortgagor”) and Taiwan Cooperative Bank Co., Ltd. (in its capacity as a joint and several creditors under Article 283 of the Civil Code and for the joint and several benefits of the Banks under the Syndicated Loan Agreement referred to below; hereinafter referred to as the “Creditor” or the “Mortgagee”).

WHEREAS, the Debtor has executed a Syndicated Loan Agreement (hereinafter the “Syndicated Loan Agreement”) with the Mortgagee and all Banks named therein with a facility amount of NT\$12 billion (NT\$12,000,000,000) on May 15, 2018. To secure the obligations and debts arising from the aforesaid Syndicated Loan Agreement, the Debtor provides the collateral (hereinafter the “Collateral”) as set forth in the mortgage agreement as mortgage in favor of the Mortgagee with the rights of first priority mortgage with the maximum secured amount of NT\$. The determination date for the debts secured by the maximum amount mortgage shall be (MM/DD/YYYY).

The Mortgagor hereby agrees to waive all rights under Article 881-7 of the Civil Code and agrees to the following:

1. The scope of the debts secured by maximum amount mortgage:

The Mortgagor hereby agrees that the debts secured by this maximum amount mortgage shall include all current (including those incurred but unpaid) and future debts owed to the Mortgagee under the Syndicated Loan Agreement, including the note obligations incurred by the Debtor to the Banks under the Syndicated Loan Agreement (including those from issuing notes, endorsement of notes, acceptance, note guarantee and other note debts), principal, interest, default interest, penalties, disbursement, arranger’s fee, agent’s fee, commitment fee, compensations, amendment fee, appraisal fee of the Collateral, registration (or registration for the change of rights) fee of the Collateral, insurance premium, expenses for obtaining a writ of execution, expenses for compulsory enforcement, expenses for participation of distribution, other fees or damages due to the failure to perform all the obligations therein.

2. Handled in accordance with the Syndicated Loan Agreement:

The Mortgagee may determine the repayment date for the respective debt secured under this Agreement. The Mortgagee may, in accordance with the Syndicated Loan Agreement, suspend or reduce the drawdown of the facility, or collect the entire or partial advanced amount; the Mortgagee may also, in accordance with the Syndicated Loan Agreement, reduce the facility amount or shorten the facility period, or accelerate the entire or partial outstanding amount to maturity. The Mortgagor shall agree to act as above without any objections.

3. Declaration of the Mortgagor:

The Mortgagor hereby declares that the Mortgagor has the complete and legal rights to the Collateral. Except for those mortgaged (which shall be handled pursuant to the Syndicated Loan Agreement), there is no third party interests, encumbrances, lending, or legal prohibition against seizure, possession, transfer or pledge over the Collateral. The Collateral has not been seized or detained. Should disputes arise because any of the statements above is false or there are flaws in the quality or rights of the Collateral, the Mortgagee may order the Mortgagor to provide other Collateral of equivalent value that is approved by the Mortgagee within a designated period of time, or request the Debtor, and the Debtor shall agree, in addition to paying off all debts within the designated period of time, to indemnify all damage suffered by the Mortgagee.

4. Preservation of the Collateral:

If the Collateral is damaged, diminished, or devaluation, the Mortgagor shall notify the Mortgagee immediately. Regardless of whether the aforesaid circumstances are attributable to the Mortgagor, the Mortgagee may order the Mortgagor to provide other collateral equivalent of diminished value that is approved by the Mortgagee within a designated period of time. In case that the Mortgagor has failed to do so within the designated time, the Mortgagee may request the Mortgagor to pay off all debts immediately. Under the circumstances that the Collateral has not been provided by the Debtor, the Mortgagor, however, is responsible for the Collateral being in the aforesaid state, the Mortgagee may request the Mortgagor to remedy the Collateral to its previous state or provide other Collateral of equivalent diminished value that is approved by the Mortgagee within a designated period of time. Under the circumstances that the Mortgagor is not held responsible, the Mortgagee may request the Mortgagor to provide collateral within the extent of the damage suffered by the Mortgagee. Without the written consent from the Mortgagee, the Mortgagor shall not demolish, alter, or enlarge the Collateral in part or in whole, or conduct any other act that is enough to reduce the value of the Collateral. Provided, however, that the Mortgagee shall not withhold or delay such consent without any legitimate reason. Any tax, maintenance, and other related costs of the Collateral shall be borne by the Mortgagor.

5. Action in relation to registrations:

In case that the Collateral is required to be registered for the creation of mortgage or other changes, the Mortgagor and Mortgagee shall act accordingly.

6. Insurance for the Collateral:

The Mortgagee shall be the priority loss payee of the insurance for the Collateral, or the mortgagee of the insurance policy for the Collateral. The Collateral shall be insured at an insurance company under a policy (including but not limited to fire insurance, earthquake insurance and other relevant insurance) that corresponds to the standards of the Debtor's industry pursuant to the Syndicated Loan Agreement. The Mortgagee may notify the Mortgagor to get insured under other policies in accordance with common practice in the same business whenever it deems necessary, and the Mortgagor shall bear all costs incurred. All original copies of the insurance policy and the duplicates of the receipt for premiums shall be delivered to the Mortgagee for retention. The Mortgagee may use this Agreement as authorization to take out or renew the insurance on the Mortgagor's behalf when the Mortgagor fails to do so. In case that the Mortgagee has paid for the premiums on the Mortgagor's behalf, the Mortgagor shall repay the fees immediately. Should the Mortgagor fails to do so, the Mortgagee may include such premiums into the amount owned by the Debtor and calculate the interest accrued according to the interest rate under the Syndicated Loan Agreement. However, the Mortgagee is not obliged to take out or renew the insurance or pay premiums on the Mortgagor's behalf. In case that the Collateral is damaged, regardless of the reasons raised by the insurance company for the refusal or delay in the payment of the insurance compensation, or under the circumstances that the insurance compensation is insufficient, the Debtor shall immediately repay the principal, default interest, penalties, compensation and other expenses of the debt, or provide other collateral as approved by the Mortgagee, and shall not use any excuses to evade responsibility. Prior to receiving the insurance compensation, the Debtor shall provide other equivalent collateral as approved by the Mortgagee in favor of the Mortgagee should the Mortgagee deems necessary.

7. Subrogation:
In case that the Mortgagor may receive compensation, indemnification or other interests from a third party due to expropriation of all or partial of the Collateral or for other reasons, the Mortgagee has the right to directly receive such payment on the Mortgagor's behalf, and such payment shall be used to offset both expired and unexpired debt and the Debtor shall not object. This Agreement shall be used as the proof for this authorization.
8. Remainder of the Disposal of Collateral:
The remainder after the proceeds from the disposal of the Collateral has been used to settle all of the Mortgagor's debts and costs shall be returned to the Mortgagor.
9. Scope of Subject Covered By Mortgage:
The mortgage over the Collateral shall cover chattel attached to the constructions and those buildings without independency and all equipment attached to said buildings (including tap water, gas, electricity, air conditioners or heaters, sanitary equipment, etc.), and other rights, objects, and attachments and parking spaces.
10. Governing Law:
The requisite elements and effect for, and all manners for juridical acts of, the Debtors' debts and obligations to be fulfilled under this Agreement, and the Mortgagee's rights as a secured creditor under this Agreement, shall be governed by the laws of the Republic of China.
11. Place of Performance and Consensual Jurisdiction:
The place of performance for matters stipulated herein shall be the _____ Branch of the Mortgagee. Should there be any legal proceedings due to the Debtor's or the Mortgagor's breach or default, the Mortgagee, the Debtor and the Mortgagor agree that the Taiwan Hsinchu District Court shall be the court of first instance, unless other exclusive jurisdiction applies pursuant to the law.

12. **The Parties' Successors:**
The Debtor referred to herein shall include its successors, assignees, or bankruptcy administrators. If the Mortgagee's representative has changed, the new person assuming such position shall be the representative of the legal entity having rights and obligations hereunder and registration need not to be amended.
13. **Non-waiver:**
Unless otherwise waived by the Mortgagee in writing, the Mortgagee's non-implementation, or delay of implementation, of the authorities, rights or interests under this Agreement or under any documents signed by the Mortgagee, Mortgagor or Debtor, shall not be interpreted that the Mortgagee waives such authorities, rights or interests. If said authorities or rights were exercised only once or partially exercised, there should be no indication that said authorities or rights cannot be exercised again or other parts of the authorities or rights cannot be exercised again.
14. **Matters Not Stipulated:**
Any matters not stipulated herein or in the attachments shall be subject to the laws of the Republic of China.
15. **Interpretation of Headings:**
The headings used in the Agreement are for reference purposes only and should not be the only basis for the interpretation of this Agreement.

Separately Negotiated

1. **The Mortgagor shall bear the fees (including other relevant expenses) incurred for registration of the creation, change and cancellation of mortgage.**
2. **Unless otherwise provided in the Syndicated Loan Agreement, the Mortgagor shall not create any encumbrances upon the Collateral without obtaining the Mortgagee's prior approval in writing. Should the Mortgagor breaches the aforesaid covenant, the Mortgagee may request the Mortgagor to provide other collateral of equivalent value that is approved by the Mortgagee within a designated period of time, or request the Debtor, in addition to paying off all debts within the designated period of time, to indemnify all damage suffered by the Mortgagee.**

The Debtor and Mortgagor have fully understood and agreed to the contents of the above two separately negotiated provisions.

Statement:

The Debtor and Mortgagor hereby state that they have reviewed the contents of all the above provisions within a reasonable period, and the Agreement shall have binding effect on them.

This Building Mortgage Agreement is executed by:

The Creditor and the Mortgagee:

Representative:

Address:

Agent:

Address:

The Debtor and the Mortgagor: ChipMOS TECHNOLOGIES INC.

Representative: Chairman Shih-Jye Cheng

VAT number: 16130042

Address: No.1, R&D Road 1, Baoshan Township, Hsinchu Science Park, Hsinchu County

Date:

Chattel Mortgage Agreement

This Chattel Mortgage Agreement (hereinafter the “Agreement”) is executed between ChipMOS TECHNOLOGIES INC. (a company incorporated under the laws of the Republic of China, with registered office at No.1, R&D Road 1, Baoshan Township, Hsinchu Science Park, Hsinchu County, as the debtor and the mortgagor; hereinafter referred to as the “Debtor” or the “Mortgagor”) and Bank of Taiwan Co., Ltd. (in its capacity as a joint and several creditors under Article 283 of the Civil Code and for the joint and several benefits of the Banks under the Syndicated Loan Agreement referred to below; hereinafter referred to as the “Creditor” or the “Mortgagee”) on (MM/DD/YYYY).

WHEREAS, the Banks (to which the Mortgagee acted as the Collateral Agent) and the Debtor have executed a Syndicated Loan Agreement (hereinafter the “Syndicated Loan Agreement”) with a facility amount of NT\$12 billion (NT\$12,000,000,000) on May 15, 2018.

Both Parties have executed this Agreement pursuant to the Syndicated Loan Agreement and agree as follows:

1. The scope of the debts secured by maximum amount mortgage:

To provide security for the various debts under the Syndicated Loan Agreement, including the note obligations incurred by the Debtor to the Banks under the Syndicated Loan Agreement (including those from issuing notes, endorsement of notes, acceptance, note guarantee and other note debts), principal, interest, default interest, penalties, disbursement, arranger’s fee, agent’s fee, commitment fee, compensations, amendment fee, appraisal fee of the Collateral, registration (or registration for the change of rights) fee of the Collateral, insurance premium, expenses for obtaining a writ of execution, expenses for compulsory enforcement, expenses for participation of distribution, other fees or damages due to the failure to perform all the obligations therein, and all debts agreed to be borne by the Debtor (hereinafter, the “Secured Debt”), the Mortgagor shall create, pursuant to the Syndicated Loan Agreement, the first priority chattel mortgage in favor of the Mortgagee in the maximum amount of NT\$ _____ on the collateral (hereinafter the “Collateral”) set forth in the attachment.

2. Validity Period:

This Agreement shall be valid for ten years, from (MM/DD/YYYY) to (MM/DD/YYYY). Once the validity period has expired, the Mortgagee may apply for an extension of the registration period pursuant to Paragraph 1, Article 9 of the Personal Property Secured Transactions Act. The Mortgagor hereby agrees to waive its rights provided by Article 881-7 of the Civil Code.

3. Collateral Storage Site:

The storage site of the Collateral under the Agreement shall be _____. The Mortgagor shall not change the storage site without prior written consent by the Mortgagee.

4. Relationship between the Agreement and the Syndicated Loan Agreement:

The Mortgagor hereby agrees to pay the interest, default interest, penalties and expenses regarding the Secured Debt according to the interest rate set forth in the Syndicated Loan Agreement, which shall be paid using the method and at the time pursuant to the Syndicated Loan Agreement (hereinafter the Syndicated Loan Agreement shall be regarded as part of this Agreement). Unless otherwise defined in this Agreement, all terms used herein shall have the same meanings as those given in the Syndicated Loan Agreement.

5. Registration and Other Relevant Obligations:

The Mortgagor and the Mortgagee shall together file with the competent authority for the registration for the creation of the first priority chattel mortgage over the Collateral with the maximum amount in favor of the Mortgagee immediately after the execution of this Agreement. The Mortgagor, whenever upon the Mortgagee's request, shall imprint or affix labels to the Collateral and maintain such labels at all times. The Mortgagor shall bear the costs arising from the registration, imprinting or affixing of labels. Registrations shall be made whenever there is an increase or decrease in the Collateral, or that the storage site has changed. The Mortgagor shall bear the registration fees.

6. Declaration of the Mortgagor:

The Mortgagor hereby declares that the Mortgagor has the complete and legal rights to the Collateral. Except for those permitted under the Syndicated Loan Agreement, no third party has interests, claim of rights, lease rights or security rights in rem over the Collateral. Should disputes arise because of the owner rights or other rights to the Collateral, the Mortgagor shall ensure that the Mortgagee shall not suffer any damage, and to indemnify all damage suffered by the Mortgagee.

7. Collateral Maintenance:

The Mortgagor shall appropriately maintain the Collateral according to the use and maintenance manual provided by the manufacturer, and shall appropriately use and operate the Collateral. In case that the Collateral is severely damaged or diminished, the Mortgagor shall immediately notify the Mortgagee in writing. Regardless of whether the aforesaid was caused by an event of force majeure or others, and regardless of whether the Mortgagor is at fault, the Mortgagor shall provide other collateral that is approved by the Mortgagee or provide cash of equivalent value, or immediately pay off all debts secured by such Collateral upon the Mortgagee's request.

8. Collateral Repairing or Processing:

If repairing or processing to the Collateral is necessary, the Mortgagor shall notify the repairmen or processor that a chattel mortgage has been created over the Collateral in favor of the Mortgagee, and shall retain any proof of such notification.

9. Encumbrances such as tax:

The Mortgagor shall be liable for any taxes, tariffs, regulation fees or other expenses relevant with obtaining, retaining, using and/or repairing the Collateral and shall make payments within the expiry date at all times.

10. Events of Default:

1) The Mortgagee, when exercises the rights under the Syndicated Loan Agreement, may enter the storage site of the Collateral at all times and possess all or a portion of the Collateral, and may move such Collateral from its original site without informing the Mortgagor or obtaining the Mortgagor's consent. The Mortgagor shall be liable for all damages or fees incurred from possessing or moving the Collateral. If the Mortgagor or any third party refused to deliver the Collateral to the Mortgagee, it shall be subject to compulsory execution order of the court. The Mortgagee may directly petition the court to issue an order for compulsory execution pursuant to Article 17 of the Personal Property Secured Transactions Act.

2) The Mortgagor may redeem the Collateral if within ten (10) calendar days since the Mortgagee possesses the Collateral, the Mortgagor or a third party pays off all Secured Debt and other payments to be made to the Mortgagee under the Agreement and the Syndicated Loan Agreement, and pays the Mortgagee all expenses incurred from the possession and storage of the Collateral. However, the Mortgagee may sell the Collateral or dispose of such Collateral in any other way if the Mortgagee deems that there is a possibility that the Collateral shall decay or its value shall substantially diminish so that such diminishment causes impairment to the Mortgagee's rights or that the repairing fees be too high. If the Mortgagor or a third party fails to make the aforementioned payments within the aforesaid ten (10) calendar days, the right to redemption shall be diminished and the Mortgagee shall be entitled to immediately sell, auction or dispose of the Collateral in any way permitted by law. The Mortgagor hereby undertakes to: (1) cooperate with the Mortgagee and the person (to whom the Mortgagee sells or actions the Collateral) purchasing the Collateral (hereinafter referred to as the "Purchaser"), sign all necessary documents and conduct all necessary application for transfer or registration to transfer the owner rights of the Collateral to the Purchaser; and (2) fulfill all obligations regarding the transfer of the owner rights of the Collateral to the Purchaser. The fees incurred from the Mortgagee's possession or disposal of the Collateral shall be first deducted from the payments received for the Collateral's disposal before offsetting the debt pursuant to the Syndicated Loan Agreement. If the payment is insufficient to pay off the due debts or debts to be due, the Mortgagor shall immediately pay the difference to the Mortgagee. The Mortgagee may participate in the bid or purchase all or part of the Collateral when the Collateral is auctioned or sold; the profit and loss of the Collateral will be irrelevant to the Mortgagor after the Mortgagee further disposes of such Collateral.

11. Subrogation:

If the Mortgagor may receive compensation due to expropriation or other actions on all or any part of the Collateral, the Mortgagor hereby authorizes the Mortgagee to directly claim for the compensation from government authorities. Such authorization shall not be withdrawn, revoked, changed, terminated or rescinded, and this Agreement shall be used as the proof for such authorization. The compensation payment shall be used to offset the debts in accordance with the Syndicated Loan Agreement. If the payment is insufficient to pay off the due debts or debts to be due, the Mortgagor shall immediately pay the difference to the Mortgagee.

12. Registration Cancellation:

The Mortgagee shall provide a pay-off certificate upon the Mortgagor's request once the Mortgagor pays off all debts and shall, to the extent necessary, assist the Mortgagor in the cancelation of the mortgage registration, and terminate this Agreement.

13. Profits:

If the value of the Collateral has increased upon the Mortgagee's retrieval and possession of the Collateral, or that profits have incurred as a result of the use or possession of the Collateral, the Mortgagee shall use such profits to pay off the debts.

14. Transfer Effect:

This Agreement shall have a binding effect on the successors, trustees, administrators, reorganizers and liquidators of the Mortgagor. However, the Mortgagor shall not transfer any of its interests, rights or obligations under this Agreement without obtaining prior written consent of the Mortgagee. The Mortgagee may, after notifying the Mortgagor (but without obtaining the Mortgagor's consent), transfer part or all of its rights under this Agreement to the person who has assumed the right of claim against the Secured Debt. With regard to the transfer by the Mortgagee, the Mortgagor hereby agrees to sign the necessary documents and cooperate with the necessary measures (including but not limited to the re-application for the registration of the chattel mortgage or the registration of the change in accordance with this Agreement; however, the Mortgagee shall be liable for the fees incurred as a result), so that the transferee becomes the party to this Agreement and obtains the rights to the Collateral that the first priority mortgage with maximum amount is created upon.

15. Governing Law and Jurisdiction:

This Agreement and the created chattel mortgage under this Agreement are subject to the laws of the Republic of China. The parties agree that any disputes arising from this Agreement shall be submitted to Taiwan Hsinchu District Court as the court of first instance, unless otherwise required to be submitted to the exclusive jurisdiction as provided by law.

16. Matters Not Stipulated:

Any matters not stipulated herein shall be subject to the laws of the Republic of China and the regulations and customs set out or to be set out by the finance industry of Taiwan and the Mortgagee.

17. Mortgagee's rights in the Disposal of the Collateral:

The various values of each Collateral listed in the mortgage registration documents are for registration calculation reference only. Each Collateral is to provide security for the Secured Debt as a whole, and the Mortgagee shall be entitled to dispose of any Collateral and use the proceeds to settle the Secured Debt.

18. Non-waiver:

Unless expressly waived by the Mortgagee in writing, the fact that the Mortgagee did not exercise, or failed to timely exercise, the rights arisen from this Agreement or any signed documents between the Mortgagee and Mortgagor or Debtor shall not mean that the Mortgagee has waived those rights. If said rights were exercised once or partially exercised, there should be no indication that said rights cannot be exercised again or other parts of the rights cannot be exercised again.

19. Insurance:

The Mortgagor shall insure the Collateral for property insurance pursuant to the Syndicated Loan Agreement.

20. Interpretation of Headings:

The headings used in the Agreement are for reference purposes only and should not be the only basis for the interpretation of this Agreement.

Attachment: Details of the Collateral

This Chattel Mortgage Agreement is executed by:

The Creditor and the Mortgagee:

Representative:

Address:

Agent:

Address:

The Debtor and the Mortgagor: ChipMOS TECHNOLOGIES INC.

Representative: Chairman Shih-Jye Cheng

VAT number: 16130042

Address: No.1, R&D Road 1, Baoshan Township, Hsinchu Science Park, Hsinchu County

Date:

Statement of Financial Consumers

The Undersigned, ChipMOS TECHNOLOGIES INC., has entered into a NT\$12 billion (NT\$12,000,000,000) Syndicated Loan Agreement (hereinafter referred to as the "Syndicated Loan Agreement") with the Banks, to which your Bank acted as the Facility Agent, on May 15, 2018. The Undersigned hereby issues the Statement of Financial Consumers pursuant to Article 10 of the Financial Consumer Protections Act:

The Undersigned hereby declares as follows:

1. The Undersigned has reviewed, within a reasonable period, all terms (including separately negotiated terms) before the execution of loan documents (including but not limited to the Syndicated Loan Agreement, the Promissory Note, the Note Authorization, the Chattel Mortgage Agreement, the Real Estate Mortgage Agreement and other terms set forth in the transfer (alteration) agreement or the joint guarantee agreement), and has fully understood the important rights, obligations and responsibilities of your Bank, and the methods and limitations to the exercise, change, rescind and termination of the Undersigned's rights, along with the liable expenses and penalties, including the collection time, calculation method and collection method, and the risks of failure to repay the principal and the interests and other breaches under the loan documents.
2. The Undersigned has been notified and understands that in addition to directly communicating with the contacting Branch, it may submit its inquiries through the following channels should questions regarding the loan or the product arises:
 - 1) Customers' Service Line: 04-2227-3131
 - 2) Customer complaint mailbox: www.tcb-bank.com.tw/quickarea/Pages/sevmail.aspx

To:
Facility Agent: Taiwan Cooperative Bank Co., Ltd.

By:
Representative:
VAT number:
Address:
Date:

Statement of Non-violation of Financial Covenants

The Undersigned, ChipMOS TECHNOLOGIES INC., has entered into a NT\$12 billion (NT\$12,000,000,000) Syndicated Loan Agreement (hereinafter referred to as the "Syndicated Loan Agreement") with the Banks, to which your Bank acted as the Facility Agent, on May 15, 2018. The Undersigned hereby issues the Statement of Non-violation of Financial Covenants pursuant to Article 18.2 of the Syndicated Loan Agreement. All terms used herein shall have the same meanings as those given in the Syndicated Loan Agreement.

The Undersigned hereby represents that no event of default, which has not been cured or cannot be cured, is occurring or continuing (or stating the nature of the breach and the measures proposed by the Undersigned).

To:
Facility Agent: Taiwan Cooperative Bank Co., Ltd.

By:
Representative:
VAT number:
Address:
Date:

Subordination Undertaking

1. The Undersigned (hereinafter "I/The Company") shall be a shareholder of ChipMOS TECHNOLOGIES INC. (hereinafter the "Borrower"). As the Borrower has entered into a NT\$12 billion (NT\$12,000,000,000) Syndicated Loan Agreement (hereinafter referred to as the "Syndicated Loan Agreement") with the Banks, to which your Bank acted as the Facility Agent, on May 15, 2018, I/the company hereby agrees that all present and future debts of the Borrower owed to the Banks pursuant to the Syndicated Loan Agreement shall take priority over all current or future debts owed by the Borrower to me/the company. Furthermore, the interest rate for all loans extended by the Undersigned to the Borrower shall not exceed the minimum loan interest rate, at that time or thereafter, of any drawdown under the Syndicated Loan Agreement.
2. I/The Company hereby agrees that with regard to all debts owed by the Borrower to me/the Company whether at present or in the future, I/the Company shall neither accept any repayment, gift, or transfer or pledge of my/the Company's claim concerning said debts to a third party, nor demand the Borrower to provide any pledge of the Borrower's assets or retain the Borrower's assets before the Borrower has fully repaid all of the debts owed to the Banks pursuant to the Syndicated Loan Agreement. However, the aforesaid restrictions shall not be applicable if the money is used by me/the Company to pay the subscription price, in whole or in part, to subscribe for the newly issued shares of the Borrower.
3. If the Banks cannot recover the debts in full owed by the Borrower or have suffered any loss or damage due to my/the Company's breach of the above covenants, I/the Company shall be liable for such loss and damage.
4. The Undersigned hereby certifies that the issuance and implementation of this Subordination Undertaking shall have been duly resolved by a meeting of the Undersigned's board of directors, and a photocopy of the meeting minutes of such board of directors shall be attached for your record.

Attachment: A photocopy of the meeting minutes of the Undersigned's board of directors (applicable for a corporate shareholder)

To:
Facility Agent: Taiwan Cooperative Bank Co., Ltd.

By:
Undersigned:
VAT number:
Address:

By:
Undersigned:
VAT number:
Address:
Date:

Assignment of Insurance Interest

This Assignment of Insurance Interest shall be signed and entered into between ChipMOS TECHNOLOGIES INC. (hereinafter the “Assignor”) and Bank of Taiwan Co., Ltd. (hereinafter the “Assignee”) on (MM/DD/YYYY).

WHEREAS, the Assignor and the Banks (to which the Assignee acted as the Collateral Agent) have executed a Syndicated Loan Agreement (hereinafter the “Syndicated Loan Agreement”) with a facility amount of NT\$12 billion (NT\$12,000,000,000) on May 15, 2018. Further, the Assignee holds the security interests hereunder in its capacity as a joint and several creditors under Article 283 of the Civil Code and for the joint and several benefits of the Banks under the Syndicated Loan Agreement.

WHEREAS, pursuant to Article 21.11 of the Syndicated Loan Agreement, the Assignor shall take out the insurance in the kind recognized by the Collateral Agent and consistent with the practice of the business of like kind and other accident insurance (including the insurance interests already under the insurance policies or those to be obtained) and subsequently assign the relevant insurance interests to the Assignee. The Assignor shall deliver the original copy of the insurance policy, the original copy of the cover note, the original copy of the insurance contract, the duplicate of the premium receipts and other relevant documents to the Assignee to serve as security to the Assignor’s debt under the Syndicated Loan Agreement.

It is agreed as follows:

Article 1: Unless otherwise specified herein, all terms used herein shall have the same meanings as those given in the Syndicated Loan Agreement.

Article 2: In order for the Assignor to provide security for the various debts payable pursuant to the Syndicated Loan Agreement, the Assignor shall irrevocably and unconditionally agree to the assignment as stipulated below, and the Assignor shall undertake as follows:

- (1) The Assignor shall assign the various insurance interests of the insurance purchased and the right to collect all payments relevant with the insurance to the Assignee. The Assignor shall ensure that the insurance policies or contracts includes the insurance terms and payment terms in the form and contents as required by the Assignee. Without a prior written notification to the Assignee before fourteen (14) calendar days and obtaining the Assignee’s prior approval in writing, the Assignor shall not terminate or cancel the insurance policy or contract, and all of the insurance compensations shall be paid to the Assignee. Further, the Assignor shall notify the insurer of the assignment of the insurance interests hereunder in accordance with the Syndicated Loan Agreement, and procure the Undertaking of Insurer (in the form of Exhibit 14) issued by the insurer and deliver such to the Assignee.

- (2) To ensure that the Assignee may effectively exercise all rights hereunder (including the Assignee's rights to directly collect all payments), the Assignor shall take (or allow the Assignee to take) all necessary measures according to the Assignee's requests at all times.
- (3) Unless the Assignee's prior written consent is obtained, the Assignor shall not terminate, rescind, withdraw or revoke the insurance policy or make changes or amendments to the contents of the insurance contract that is to the Assignee's disadvantage.
- (4) The Assignor shall pay premiums as agreed upon and maintain the effect of the insurance.
- (5) The Assignor shall not re-assign, create security to other parties, or dispose of any rights or interests under the relevant insurance contracts or other rights already assigned to the Assignee pursuant to this Agreement.

Article 3: The Assignor hereby declares, confirms and represents as follows:

- (1) The Assignor had not created any encumbrances on the insurance rights and interests that are the subject of this Assignment of Insurance Interest, or committed any acts that are sufficient to diminish said rights and interests. The Assignor has the right to make the assignment hereunder.
- (2) The Assignor's obligations and debt under the insurance contracts referred to herein are not assigned, and the Assignor shall remain solely responsible for the performance of these obligations to the relevant parties. The Assignee need not implement any related obligations or debts incurred by the Assignor under relevant insurance contracts due to the assignment hereunder. Even if the Assignor has failed to perform its obligations under said contracts, the Assignee shall have no obligation or responsibility to perform on behalf of the Assignor.

Article 4: The Assignee shall not be obligated to check whether the nature or amount of the payments it received pursuant to this Assignment of Insurance Interest is correct. The Assignee shall be entitled (but not obligated) to, for the purpose of obtaining such interests or payment assigned hereunder, directly pursue recovery or take legal recovery procedures.

Article 5: The Assignee may, after notifying the Assignor (but without the necessity of obtaining its approval), assign its rights under this Assignment of Insurance Interest or transfer such to the person who has obtained the creditor's rights pursuant to the Syndicated Loan Agreement; such assignee shall succeed and enjoy the rights of the Assignee hereunder within the scope as agreed between it and the Assignee.

Article 6: This Assignment of Insurance Interest shall be governed by the laws of the Republic of China, and shall not be modified or amended without the written consents from both the Assignor and the Assignee.

Article 7: The parties hereby agree that the Taiwan Hsinchu District Court shall be the court of first instance to settle any disputes arising from this Assignment of Insurance Interest.

This Assignment of Insurance Interest is executed by:

Assignor:
Representative:
Address:

Assignee:
Representative:
Address:
Agent:
Address:

Date:

Undertaking of Insurer

The undersigned, _____ Insurance Co., Ltd. (hereinafter the “Company”), hereby makes the confirmation and undertaking with regards to the Company’s insurance of ChipMOS TECHNOLOGIES INC. as follows:

1. ChipMOS TECHNOLOGIES INC., has purchased the insurances from the Company as follows:

<u>Insurance Type</u>	<u>Insured Amount</u>	<u>Insurance Number</u>	<u>Insurance Period</u>
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2. The Company is aware of the fact that ChipMOS TECHNOLOGIES INC. has signed a NT\$12 billion (NT\$12,000,000,000) Syndicated Loan Agreement on May 15, 2018 with the Banks, to which your Bank acts as the Collateral Agent, and has signed an Assignment of Insurance Interest with your Bank on (MM/DD/ YYYY), pursuant to which ChipMOS TECHNOLOGIES INC. assigned all insurance interests of the aforementioned subjects (including the insurance interests already under the insurance policies or those to be obtained) to your Bank to hold the security interests in your capacity as a joint and several creditors and for the joint and several benefits of the Banks. The Company has been notified and hereby agrees to such assignment.
3. The Company has named your Bank as the sole priority loss payee in the aforementioned insurance policy and relevant documents, and any and all payments of the aforesaid insurance claim shall be made to your Bank.
4. If the Company does not timely receive the premium for the aforementioned insurance, your Bank shall be notified immediately. Unless the Company has given your Bank a written notice for fourteen (14) calendar days in advance and a reasonable opportunity to settle the unpaid premium, the Company hereby agrees that it shall not cancel or terminate such insurance policy. Unless your Bank has approved in writing, the Company shall not, by any means, terminate, cancel, rescind or revoke the insurance contract or render such contract invalid or unenforceable for any reason.
5. If the aforementioned insurance policy is subsequently extended or updated, the Company shall submit the extended or updated insurance policy as well as the relevant documents directly to your Bank based on the instructions provided by your Bank.
6. The Company shall notify your Bank in writing at least fourteen (14) calendar days prior to the expiry of the aforementioned insurance policy (including the extended or updated one), and inform your Bank whether the Company has received instructions on the extension or renewal. The Company shall immediately inform your Bank upon receiving the instructions for the aforementioned extension or renewal.

7. The Company shall immediately notify your Bank in writing if ChipMOS TECHNOLOGIES INC., has requested the Company to modify the insurance terms or terminate the aforementioned insurance, or an event has occurred which might cause the insurance to be invalid, revocable or unenforceable. Without the prior written consent from your Bank, the Company shall not reduce the insured amount of the insurance, change the insurance type, scope of coverage, loss payee, or terms of insurance payment, make any changes that might adversely affect your Bank's rights, or terminate or cancel the insurance policy or contract.

To:
Bank of Taiwan Co., Ltd.

By:
Undersigned:
Representative:
VAT number:
Address:

Date:

Assignment Agreement

This Assignment Agreement (hereinafter the “Agreement”) is entered into by and between _____ (hereinafter the “Assignor”) and _____ (hereinafter the “Assignee”) on (MM/DD/YYYY).

WHEREAS, on May 15, 2018, the Assignor has entered into a NT\$12 billion (NT\$12,000,000,000) Syndicated Loan Agreement (hereinafter the “Syndicated Loan Agreement”) with ChipMOS TECHNOLOGIES INC. (hereinafter the “Borrower”) and the Banks, to which Taiwan Cooperative Bank Co., Ltd. acted as the Facility Agent, for the purpose of extending a loan to the Borrower.

WHEREAS, for assuming the Assignor’s Commitment Amount, the Assignee is desirous of assuming all rights and obligations of the Assignor under the Syndicated Loan Agreement, and the Assignor agrees to assign its Commitment Amount to the Assignee.

It is agreed as follows:

1. Definitions

Unless otherwise defined in this Agreement, all terms herein shall have the same meanings and definitions as those given in the Syndicated Loan Agreement.

2. Assignment of Rights and Obligation Under Syndicated Loan Agreement

The Assignor hereby agrees to assign its rights and obligations under the Syndicated Loan Agreement to the Assignee within the following extent:

(1) Tranche A Facility:

- 1. Within the amount of NT\$ _____ of the rights and obligations of the drawn Tranche A Facility of its Commitment Amount.
- 2. Within the amount of NT\$ _____ of the rights and obligations of the undrawn Tranche A Facility of its Commitment Amount.

(2) Tranche B Facility:

- 1. Within the amount of NT\$ _____ of the rights and obligations of the drawn Tranche B Facility of its Commitment Amount.
- 2. Within the amount of NT\$ _____ of the rights and obligations of the undrawn Tranche B Facility of its Commitment Amount.

3. Purchase Price

The Assignor hereby agrees to pay the Assignee (currency:) dollars as purchase price. The Assignee shall, through telegraphic transfer or other means agreed on by both parties, remit such purchase price to the account designated by the Assignor. The Assignee shall make payments required under this Agreement in full in (currency:) dollars, and no taxes shall be deducted or withheld. The payments shall not be made in the form of assets or in any other form.

4. Assignment Fee

The Assignee hereby agrees to pay to the Assignor the assignment fee for the assignment of Commitment Amount hereunder, at the rate of % of the Commitment Amount assigned to it. Such payment shall be made in a lump sum on the date of this Agreement.

5. Effective Date

The Agreement shall take effect on the date of execution.

6. Declarations and Confirmation

With respect to the assignment of the Commitment Amount and relevant rights and obligations pursuant to this Agreement, the Assignee hereby represents and confirms as follows:

- (1) The Assignee has received the duplicate of the Syndicated Loan Agreement and necessary documents delivered by the Assignor.
- (2) Commencing on the execution date of this Agreement, the Assignee shall exercise the rights and perform the obligations under the Syndicated Loan Agreement with respect to the Commitment Amount assigned by the Assignor.
- (3) With regard to the Borrower's credit, financial condition, ability to make repayment and the risks involved in the Facility, the Assignee has conducted independent investigation and assessment in accordance with normal loan procedures, and, based on the results of independent investigation and assessment, has decided to provide such loan and assume the Assignor's Commitment Amount.
- (4) The Assignee should independently assume the relevant loan risk of its participated and assumed Commitment Amount. With respect to any matters relating to the Facility extended to the Borrower, the Assignor has not made any declaration to the Assignee. With regard to whether the Borrower will perform its contractual obligations or any matters relating to its financial ability, business status and ability to repay etc., the Assignor shall not bear any guarantee obligation.
- (5) The respective Party hereto has obtained all necessary internal authorization with respect to the execution of this Agreement, and this Agreement shall be binding on the parties hereto.

7. Notice

Upon the execution of this Agreement, the parties hereto shall jointly sign the Notice of Assignment (in the form as Exhibit 16 to the Syndicated Loan Agreement) pursuant to the Syndicated Loan Agreement to notify the Borrower and the Facility Agent of the assignment hereunder.

8. Confidentiality

Unless otherwise notified in accordance with the Syndicated Loan Agreement and this Agreement, the parties hereto shall maintain confidentiality with regard to the contents of this Agreement.

9. Applicable Law

For any matters not stipulated herein, the laws of the Republic of China shall apply.

10. Jurisdiction

The parties hereto agree that any legal actions or proceedings arising from or relating to this Agreement shall be submitted to the jurisdiction of Taiwan District Court as the court of first instance.

This Assignment Agreement is executed by:

Assignor:
Representative:
Agent:
Address:

Assignee:
Representative:
Agent:
Address:

Date:

Notice of Assignment

Subject:

On May 15, 2018, ChipMOS TECHNOLOGIES INC. and the Banks, to which Taiwan Cooperative Bank Co., Ltd. acts as the Facility Agent, have entered into a NT\$12 billion (NT\$12,000,000,000) Syndicated Loan Agreement (hereinafter the "Syndicated Loan Agreement"). Please be notified that the rights and obligations of _____ under the Syndicated Loan Agreement have been assigned to _____ on (MM/DD/YYYY).

Explanation:

1. _____ (hereinafter the "Assignor"), as one of the Banks under the Syndicated Loan Agreement, has extended the Commitment Amount as follows to the Borrower:
 - (1) Tranche A Facility Commitment Amount: NT\$ _____ .
 - (2) Tranche B Facility Commitment Amount: NT\$ _____ .
2. The Assignor and _____ (hereinafter the "Assignee") have entered into an Assignment Agreement (the duplicate as attached hereto) on (MM/DD/YYYY). Pursuant to the Assignment Agreement, the Assignor agrees to assign the relevant rights and obligations of NT\$ _____ of its Commitment Amount under the Syndicated Loan Agreement to the Assignee, so that the Assignee may exercise the rights and obligations to such assigned Commitment Amount in accordance with the Syndicated Loan Agreement. Since the date of such assignment, the Assignee shall comply with the arrangements under the Syndicated Loan Agreement, and maintain confidentiality with regard to the contents of the Assignment Agreement and the Syndicated Loan Agreement.
3. The Commitment Amount for the Assignor and the Assignee, respectively, under the Syndicated Loan Agreement is adjusted as follows after the aforementioned assignment:
 - (1) Assignor: NT\$ _____ .
 1. For Tranche A Facility: NT\$ _____ .
 2. For Tranche B Facility: NT\$ _____ .
 - (2) Assignee: NT\$ _____ .
 1. For Tranche A Facility: NT\$ _____ .
 2. For Tranche B Facility: NT\$ _____ .

4. After this Notice is served, any notices to be made to the Assignor under the Syndicated Loan Agreement shall be delivered to the Assignee's address set forth in this Notice in the manners pursuant to the Syndicated Loan Agreement; any payments to be made to the Assignee shall be remitted to the Assignee through the Inter-bank Remittance System Service.
5. This Notice is made according to Article 40.2 of the Syndicated Loan Agreement.

To :

Borrower: ChipMOS TECHNOLOGIES INC.

Facility Agent: Taiwan Cooperative Bank Co., Ltd.

By:

Assignor:

Representative:

Agent:

Address:

Assignee:

Representative:

Agent:

Address:

Date:

Opinion of Counsel

On May 15, 2018, ChipMOS TECHNOLOGIES INC. (hereinafter the “Borrower”) and Taiwan Cooperative Bank Co., Ltd. (hereinafter “your Bank”) along with other ten financial institutions (hereinafter the “Bank”), to which your Bank acted as the Facility Agent, have entered into a NT\$12 billion (NT\$12,000,000,000) Syndicated Loan Agreement (hereinafter the “Syndicated Loan Agreement”). I have been appointed by the Banks to act as their legal counsel. This Opinion of Counsel is issued according to the Syndicated Loan Agreement and the laws of the Republic of China.

1. Documents reviewed with respect to the Syndicated Loan Agreement:

To issue this Opinion, I have examined photocopies of the following documents provided by the Collateral Agent:

- (1) The Syndicated Loan Agreement executed on May 15, 2018 between the Borrower and the Banks.
- (2) The board of directors meeting minutes of the Borrower which resolved the Facility, the authorization of the representative to execute the Syndicated Loan Agreement, the Promissory Notes, the Note Authorizations and other relevant documents.
- (3) The latest articles of incorporation, and the latest amendment of corporate registration card (with the register of directors) of the Borrower.
- (4) The Promissory Notes and Notes of Authorization issued by the Borrower.
- (5) Negative Pledge Certificate and non-letting or non-lending certificate issued by the Borrower.

2. Assumptions:

This Opinion is issued based on the following assumptions:

- (1) The conformity with the originals of all documents submitted to me as copies thereof.
- (2) All documents submitted to me have been duly authorized, validly signed by the signing parties, having a binding effect upon them. The execution and delivery of those documents have not violated any law, orders, permits, agreement or documents to which the signing parties are subject.
- (3) The genuineness of all signatures and seals on all the documents submitted to me.
- (4) Where any signing party is a corporation, it shall be a corporation duly organized and existing under the laws of the jurisdiction of its incorporation.

3. Based on the above assumptions and the review of the aforementioned documents, I am of the following opinions, with respect to the laws of the Republic of China:

- (1) The Borrower is duly organized and existing as a company limited by shares under the laws of the Republic of China, and may conduct the businesses as set forth in its corporate registration card.
- (2) The Borrower has the full legal right, capacity and authority to execute the Syndicated Loan Agreement and relevant documents and to perform its obligations thereunder.
- (3) The Borrower's Board of Directors has agreed to the execution of the Syndicated Loan Agreement and all relevant loan documents. Shih-Jye Cheng, as the chairman, has been authorized to execute the Syndicated Loan Agreement and relevant documents.
- (4) The Syndicated Loan Agreement and other relevant documents are legal, having binding effects on the Borrower. The Bank may demand the Borrower for performance under such Agreements.
- (5) Pursuant to the Syndicated Loan Agreement, the governing law of the Syndicated Loan Agreement shall be the laws of the Republic of China; all legal actions or proceedings arising from or relating to such Agreement shall be submitted to the jurisdiction of Taiwan Hsinchu District Court as the court of first instance unless other exclusive jurisdiction applies pursuant to the law. As such, all relief or procedures with respect to the Syndicated Loan Agreement and other relevant documents shall be governed pursuant to the procedures and relief under the laws of the Republic of China by the Hsinchu District Court.

4. Qualifications

This Opinion is subject to the following qualifications:

- (1) This Opinion is based on the announced and effective laws and regulations of the Republic of China as of the date. I shall not be obliged to make notifications of any subsequent changes in the law.
- (2) The enforceability of the obligations under the Syndicated Loan Agreement and other documents is subject to any applicable bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally.
- (3) The waiver of creditors' liability shall be subject to the limitations under the Syndicated Loan Agreement and the laws of the Republic of China.
- (4) The exercise of creditors' rights may be subject to the statute of limitations or offset.
- (5) Should the court deem the amount of the agreed penalty excessive, the court may reduce such sum to a comparable amount.
- (6) If there is any arrangement that matters should be subject to the creditor's sole discretion, such discretion shall not be abused and shall be exercised in a manner of good faith.

5. Miscellaneous

This Opinion is issued to your Bank exclusively for the execution and delivery of the Syndicated Loan Agreement and other relevant documents. Your Bank, as the Facility Agent, may deliver this Opinion to the Banks. However, without the counsel's prior written approval, your Bank and the Banks shall not disclose this Opinion, in whole or in part, to any third party (except for the assignees of the Banks) by any means, or make this Opinion known to the public. The Banks or any third party shall not claim that they have executed the Syndicated Loan Agreement due to the reliance of this Opinion.

To :
Facility Agent: Taiwan Cooperative Bank Co., Ltd.

Weishin Attorneys-at-law
Zhan-Yi Lin

Member of the Taipei Bar Association
Bar Certification No.:
Address:
Date:

List of Principal Subsidiaries

<u>Name</u>	<u>Place of Incorporation</u>
ChipMOS TECHNOLOGIES (BVI) LTD.	British Virgin Islands
ChipMOS U.S.A., INC.	U.S.A.

CERTIFICATIONS

I, Shih-Jye Cheng, certify that:

1. I have reviewed this annual report on Form 20-F of ChipMOS TECHNOLOGIES INC.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 25, 2019

/s/ Shih-Jye Cheng

Name: Shih-Jye Cheng

Title: Chairman and President

CERTIFICATIONS

I, Silvia Su, certify that:

1. I have reviewed this annual report on Form 20-F of ChipMOS TECHNOLOGIES INC.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of company's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 25, 2019

/s/ Silvia Su

Name: Silvia Su

**Title: Vice President, Finance and Accounting
Management Center**

ChipMOS TECHNOLOGIES INC.
CERTIFICATION

Pursuant to 18 U.S.C. §1350, the undersigned, Shih-Jye Cheng, Chairman and President of ChipMOS TECHNOLOGIES INC. (the "Company"), hereby certifies, to his knowledge, that the Company's Annual Report on Form 20-F for the year ended December 31, 2018 (the "Report") fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company, as of, and for, the periods presented in the Report.

The foregoing certification is being furnished pursuant to 18 U.S.C. §1350 solely for purposes of complying with the provisions of Section 906 of the Sarbanes-Oxley Act of 2002, is not intended to be used or relied upon for any other purpose and is not being filed as part of the Report or as a separate disclosure document.

Date: April 25, 2019

/s/ Shih-Jye Cheng

Name: Shih-Jye Cheng

Title: Chairman and President

**ChipMOS TECHNOLOGIES INC.
CERTIFICATION**

Pursuant to 18 U.S.C. §1350, the undersigned, Silvia Su, Vice President of the Finance and Accounting Management Center of ChipMOS TECHNOLOGIES INC. (the "Company"), hereby certifies, to her knowledge, that the Company's Annual Report on Form 20-F for the year ended December 31, 2018 (the "Report") fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company, as of, and for, the periods presented in the Report.

The foregoing certification is being furnished pursuant to 18 U.S.C. §1350 solely for purposes of complying with the provisions of Section 906 of the Sarbanes-Oxley Act of 2002, is not intended to be used or relied upon for any other purpose and is not being filed as part of the Report or as a separate disclosure document.

Date: April 25, 2019

/s/ Silvia Su

Name: Silvia Su
**Title: Vice President, Finance and Accounting
Management Center**