CHIPMOS TECHNOLOGIES BERMUDA LTD
Form 20-F
April 25, 2014
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As filed with the Securities and Exchange Commission on April 25, 2014

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

x **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2013

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 0 31106

ChipMOS TECHNOLOGIES (Bermuda) LTD.

(Exact Name of Registrant as Specified in Its Charter)

Bermuda

(Jurisdiction of Incorporation or Organization)

No. 1, R&D Road 1, Hsinchu Science Park

Hsinchu, Taiwan

Republic of China

(Address of Principal Executive Offices)

Shou-Kang Chen

Chief Financial Officer

ChipMOS TECHNOLOGIES (Bermuda) LTD.

No. 1, R&D Road 1, Hsinchu Science Park

Hsinchu, Taiwan

Republic of China

Telephone: (886) 3 563 3988

Facsimile: (886) 3 563 3998

(Name, Telephone, E-mail and/or Facsimile Number and Address of Company Contract Person)

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Shares, par value US$0.04 each	The NASDAQ Capital 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, 2013, 29,684,530 Common Shares, par value US$0.04 each, were outstanding (not including 2,093,705 Common Shares held by our subsidiary).

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

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 x

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 x No ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes ¨ No ¨

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

Large Accelerated Filer ¨ Accelerated Filer x Non-Accelerated Filer ¨

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 x 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 x

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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 significant risks and uncertainties. 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 or other similar words that express an indication of actions c 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 testing and assembly 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;
- the pending criminal indictment of our chairman and chief executive officer;
- 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 outcome of any pending litigation;

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 to which we conduct operations; and

general local and global economic and financial conditions.

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 expansion plans 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 both IFRSs and ROC GAAP, and the information based on ROC GAAP is not comparable to information prepared in accordance with IFRSs.

PART I

Item 1. Identity of Directors, Senior Management and Advisers

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

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Item 3. Key Information

Selected Financial Data

The following tables set forth our selected consolidated financial data. Commencing January 1, 2013, the Company prepared its consolidated financial statement in accordance with International Financial Reporting Standards (IFRSs) as issued by the International Accounting Standards Board. According to Form 20-F Instruction G, the selected consolidated financial data under IFRSs for 2012 and 2013, under US GAAP for 2009 through 2011 and under ROC GAAP for 2009 through 2012 are provided below. The selected consolidated statements of financial position data as of December 31, 2012 and 2013 and our consolidated income statements and cash flows data for the years ended December 31, 2012 and 2013 under IFRSs 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. These audited consolidated financial statements have been audited by Moore Stephens. The selected consolidated balance sheet data as of December 31, 2009, 2010, 2011 and 2012 and the consolidated statement of operations and cash flows data for the years ended December 31, 2009, 2010, 2011 and 2012 under US GAAP or ROC GAAP are derived from our audited consolidated financial statements not included herein.

	Year ended December 31,		
	2012 NT$	2013 NT$	2013 US$
	(in millions, except per share data)		
Consolidated Income Statements Data:			
IFRSs:			
Revenue	$ 19,220.5	$ 19,361.9	$ 649.1
Cost of revenue	(16,767.9)	(15,922.4)	(533.8)
Gross profit	2,452.6	3,439.5	115.3
Other operating income	127.9	442.4	14.8
Research and development expenses	(505.4)	(564.5)	(18.9)
Sales and marketing expenses	(79.9)	(107.7)	(3.6)
Administrative and general expenses	(637.6)	(699.1)	(23.4)
Other operating expenses	(48.7)	(100.8)	(3.4)
Operating profit	1,308.9	2,409.8	80.8
Finance costs	(228.6)	(183.0)	(6.1)
Other non-operating income (expense), net	(232.5)	289.3	9.6
Profit before tax	847.8	2,516.1	84.3
Income tax	(178.1)	(827.1)	(27.7)
Profit for the year	$ 669.7	$ 1,689.0	$ 56.6
Attributable to:			
Equity holders of the Company	$ 629.8	$ 1,335.3	$ 44.8
Non-controlling interests	39.9	353.7	11.8
	$ 669.7	$ 1,689.0	$ 56.6
Earnings per share:			
Basic	$ 22.92	$ 45.55	$ 1.53
Diluted	$ 22.25	$ 44.27	$ 1.48
Weighted-average number of shares outstanding:			
Basic	27.5	29.3	29.3
Diluted	28.3	30.2	30.2

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	Year ended December 31,			
	2009 NT$	2010 NT$	2011 NT$	2012 NT$
	(in millions, except per share data)			
Consolidated Statement of Operations Data:				
ROC GAAP:				
Net revenue:				
Related parties[1]	$ 668.9	$ 2,033.3	$ 379.0	$
Others	11,481.4	15,176.4	17,831.9	19,220.5
Total net revenue	12,150.3	17,209.7	18,210.9	19,220.5
Cost of revenue	(15,661.5)	(16,564.0)	(16,549.2)	(16,638.5)
Gross profit (loss)	(3,511.2)	645.7	1,661.7	2,582.0
Operating expenses:				
Research and development	(375.3)	(412.7)	(409.8)	(492.8)
General and administrative	(657.8)	(677.6)	(651.9)	(625.6)
Sales and marketing	(561.2)	(64.4)	(66.5)	(78.4)
Total operating expenses	(1,594.3)	(1,154.7)	(1,128.2)	(1,196.8)
Income (Loss) from operations	(5,105.5)	(509.0)	533.5	1,385.2
Other income (expenses), net	116.7	2,320.6	(455.8)	(464.4)
Income (Loss) before income tax and non-controlling interests	(4,988.8)	1,811.6	77.7	920.8
Income tax benefit (expense)	420.7	99.3	(45.5)	(131.5)
Income (Loss) before non-controlling interests	(4,568.1)	1,910.9	32.2	789.3
Net (income) loss attributable to non-controlling interests	149.4	(266.2)	(47.4)	(67.5)
Net income (loss) attributable to ChipMOS	$ (4,418.7)	$ 1,644.7	$ (15.2)	$ 721.8
Earnings (Loss) per share[2]:				
Basic	$ (223.35)	$ 68.61	$ (0.57)	$ 26.27
Diluted	$ (230.15)	$ 67.38	$ (0.57)	$ 25.50
Weighted-average number of shares outstanding[2]:				
Basic	19.8	24.0	26.6	27.5
Diluted	22.3	26.8	26.6	28.3

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	Year ended December 31,		
	2009	2010	2011
	NT$	NT$	NT$
	(in millions, except per share data)		
Consolidated Statement of Operations Data:			
US GAAP:			
Net revenue	$ 12,150.3	$ 17,209.7	$ 18,210.9
Cost of revenue	(15,691.0)	(16,634.9)	(16,612.5)
Gross profit (loss)	(3,540.7)	574.8	1,598.4
Other operating income	97.2	5,039.6	120.6
Operating expenses	(1,726.5)	(2,670.6)	(1,307.5)
Income (Loss) from operations	(5,170.0)	2,943.8	411.5
Non-operating income (expenses), net	2.2	(1,197.4)	(301.9)
Income (Loss) before income tax and non-controlling interests	(5,167.8)	1,746.4	109.6
Net income (loss) attributable to ChipMOS	$ (4,550.3)	$ 1,616.9	$ 46.1
Earnings (Loss) per share[2]:			
Basic	$ (230.00)	$ 67.45	$ 1.73
Diluted	$ (236.60)	$ 66.35	$ 1.71
Weighted-average number of shares outstanding[2]:			
Basic	19.8	24.0	26.6
Diluted	20.8	26.8	26.9

(1) Related parties include Mosel Vitelic Inc., or Mosel, Siliconware Precision Industries Co. Ltd., or Siliconware Precision, ProMOS Technologies Inc., or ProMOS and DenMOS Technology Inc., or DenMOS. Commencing April 1, 2011, Mosel and its direct and indirect subsidiaries are no longer related parties of the Company as collectively, they hold less than 10% interest in ChipMOS Bermuda and are no longer considered as having significant influence on the Company. Commencing April 1, 2011, Siliconware Precision held less than 10% interest in ChipMOS Bermuda and was no longer a major shareholder of the Company.

(2) The outstanding shares and per share information reflect the reverse stock split of the Company s common stock with a ratio of 1-for-every-4 shares effective on January 21, 2011.

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	As of December 31,		
	2012 NT$	2013 NT$ (in millions)	2013 US$
Consolidated Statements of Financial Position Data:			
IFRSs:			
Non-current assets:			
Available-for-sale financial assets	$ 11.6	$ 8.6	$ 0.3
Property, plant and equipment	12,475.3	12,811.9	429.5
Other non-current assets	726.2	330.4	11.1
	13,213.1	13,150.9	440.9
Current assets:			
Inventories	1,687.9	1,519.4	50.9
Accounts and notes receivable	4,120.1	4,114.6	137.9
Other current assets	914.7	450.6	15.1
Cash and cash equivalents	8,863.6	13,372.8	448.3
	15,586.3	19,457.4	652.2
Total assets	$ 28,799.4	$ 32,608.3	$ 1,093.1
Equity and liabilities:			
Equity attributable to equity holders of the Company	11,593.6	13,564.7	454.7
Non-controlling interests	3,995.7	7,024.9	235.5
Total equity	15,589.3	20,589.6	690.2
Non-current liabilities:			
Bank loans non-current portion	6,739.9	3,889.0	130.4
Other non-current liabilities	566.2	584.7	19.6
	7,306.1	4,473.7	150.0
Current liabilities:			
Accounts payable	890.1	956.8	32.1
Payable to contractors and equipment suppliers	484.6	858.2	28.8
Other payables	1,669.2	1,541.4	51.6
Other current liabilities	265.8	527.1	17.6
Bank loans current portion	2,227.8	2,874.8	96.4
Short-term bank loans	366.5	786.7	26.4
	5,904.0	7,545.0	252.9
Total liabilities	13,210.1	12,018.7	402.9
Total equity and liabilities	$ 28,799.4	$ 32,608.3	$ 1,093.1

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	As of December 31,			
	2009	2010	2011	2012
	NT$	NT$	NT$	NT$
	(in millions)			
Consolidated Balance Sheet Data:				
ROC GAAP:				
Current assets:				
Cash and cash equivalents	$ 3,884.8	$ 7,143.3	$ 7,357.9	$ 9,319.0
Restricted cash and cash equivalents	243.8	546.8	285.1	174.5
Financial assets at fair value through profit and loss	119.0	3.0		
Investment with no active market	100.0			
Notes receivable	27.9	14.0	5.7	5.0
Accounts receivable				
related parties[1]	0.2	258.0		
third parties	2,441.8	2,816.0	3,666.5	3,992.2
Other receivables				
related parties[1]		66.4		
third parties	130.1	182.0	73.2	149.9
Inventories	862.1	1,279.8	1,533.9	1,687.9
Deferred income tax, net	356.4	278.7	76.6	77.8
Prepaid expenses and other current assets	265.1	202.3	92.3	131.8
Total current assets	8,431.2	12,790.3	13,091.2	15,538.1
Long-term investments	220.0	10.5	39.1	11.6
Property, plant and equipment net	20,769.0	17,273.0	13,896.1	12,108.0
Intangible assets net	102.8	94.2	100.5	178.9
Other assets	833.2	1,147.0	1,154.2	912.8
Total assets	30,356.2	31,315.0	28,281.1	28,749.4
Current liabilities:				
Short-term bank loans	2,363.3	1,494.7	546.9	366.5
Current portion of long-term loans	1,553.9	4,925.7	684.0	2,227.8
Convertible notes		65.8		
Accounts payable	738.0	690.1	1,130.8	890.1
Payables to contractors and equipment suppliers	201.2	790.6	415.4	484.6
Other payables	696.1	896.7	1,081.5	1,008.4
Current portion of capital leases payable	821.2	822.0		
Accrued expenses and other current liabilities	525.7	990.9	830.9	767.0
Total current liabilities	6,921.5	10,697.5	4,712.2	5,775.6
Long-term liabilities	13,475.2	6,566.4	8,579.6	6,829.3
Other liabilities	7.3	7.7	6.0	175.4
Total liabilities	20,404.0	17,271.6	13,297.8	12,780.3
Total equity (including non-controlling interests)	$ 9,952.2	$ 14,043.4	$ 14,983.3	$ 15,969.1

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	As of December 31,		
	2009 NT$	2010 NT$	2011 NT$
		(in millions)	
Consolidated Balance Sheet Data:			
US GAAP:			
Current assets:			
Cash and cash equivalents	$ 3,884.8	$ 7,143.3	$ 7,357.9
Restricted cash and cash equivalents	243.8	546.8	285.1
Financial assets at fair value through profit and loss	119.0	3.0	
Available-for-sale financial assets	100.0		
Notes receivable	27.9	14.0	5.7
Accounts receivable			
related parties[1]	0.2	258.0	
third parties	2,441.8	2,816.0	3,666.5
Other receivables			
related parties[1]		66.4	
third parties	130.1	182.0	73.2
Inventories	863.1	1,280.9	1,534.9
Deferred income tax, net	350.2	272.5	70.4
Prepaid expenses and other current assets	265.1	202.3	92.3
Total current assets	8,426.0	12,785.2	13,086.0
Long-term investments	220.0	10.5	39.1
Property, plant and equipment net	20,474.4	16,924.1	13,501.0
Intangible assets net	102.8	94.2	100.5
Other assets	893.2	1,221.1	1,237.6
Total assets	30,116.4	31,035.1	27,964.2
Current liabilities:			
Short-term bank loans	2,363.3	1,494.7	546.9
Current portion of long-term loans	1,553.9	4,925.7	684.0
Convertible notes		65.8	
Accounts payable	738.0	690.1	1,130.8
Payables to contractors and equipment suppliers	201.2	790.6	415.4
Other payables	696.1	896.7	1,081.5
Current portion of capital leases payable	821.2	822.0	
Accrued expenses and other current liabilities	525.7	990.9	830.9
Total current liabilities	6,921.5	10,697.5	4,712.2
Long-term liabilities	13,475.2	6,566.4	8,579.6
Other liabilities	286.1	398.6	383.5
Total liabilities	20,682.8	17,662.5	13,675.3
Total equity (including non-controlling interests)	$ 9,433.6	$ 13,372.6	$ 14,288.9

(1) Related parties include Mosel, Siliconware Precision, ProMOS and DenMOS. Commencing April 1, 2011, Mosel and its direct and indirect subsidiaries are no longer related parties of the Company as collectively, they hold less than 10% interest in ChipMOS Bermuda and are no longer considered as having significant influence on the Company. Commencing April 1, 2011, Siliconware Precision held less than 10% interest in ChipMOS Bermuda and was no longer a major shareholder of the Company.

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	Year ended December 31,		
	2012 NT$	2013 NT$	2013 US$
		(in millions)	
Consolidated Statement of Cash Flows Data:			
IFRSs:			
Capital expenditures	$ 2,817.9	$ 3,624.9	$ 121.5
Depreciation and amortization	4,631.8	3,294.9	110.5
Net cash generated from (used in):			
Operating activities	4,527.0	6,223.2	208.6
Investing activities	(2,599.8)	(3,005.6)	(100.7)
Financing activities	(312.3)	1,305.2	43.7
Net increase in cash and cash equivalents	$ 1,614.9	$ 4,522.8	$ 151.6

	Year ended December 31,			
	2009 NT$	2010 NT$	2011 NT$	2012 NT$
		(in millions)		
Consolidated Statement of Cash Flows Data:				
ROC GAAP:				
Capital expenditures	$ 3,479.7	$ 4,237.3	$ 2,319.3	$ 2,776.6
Depreciation and amortization	6,524.6	6,281.6	5,677.6	4,631.9
Net cash provided by (used in):				
Operating activities	781.0	8,688.9	5,898.0	4,735.3
Investing activities	(1,042.5)	(2,454.2)	(3,250.7)	(2,594.9)
Financing activities	(2,503.8)	(2,959.5)	(2,464.6)	(162.7)
Effect of exchange rate changes on cash	(1.8)	(16.8)	31.9	(16.6)
Net increase (decrease) in cash and cash equivalents	$ (2,767.1)	$ 3,258.4	$ 214.6	$ 1,961.1

	Year ended December 31,		
	2009 NT$	2010 NT$	2011 NT$
		(in millions)	
Consolidated Statement of Cash Flows Data:			
US GAAP:			
Net cash provided by (used in):			
Operating activities	$ 1,633.4	$ 8,504.0	$ 6,179.6
Investing activities	(1,042.5)	(2,454.2)	(3,250.7)
Financing activities	(2,503.8)	(2,959.5)	(2,464.6)
Net increase (decrease) in cash and cash equivalents	$ (1,912.9)	$ 3,090.3	$ 464.3

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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, 2013, which was NT$29.83 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. On April 18, 2014, the noon buying rate was NT$30.17 to US$1.00.

The following table sets out, for the years and the months indicated, information concerning the number of NT dollars for which one US dollar could be exchanged based on the noon buying rate for cable transfers in NT dollars as certified for customs purposes by the Federal Reserve Bank of New York.

	NT dollars per US dollar noon buying rate			
	Average	**High**	**Low**	**Period-end**
2009	33.02	35.21	31.95	31.95
2010	31.50	32.43	29.14	29.14
2011	29.38	30.67	28.50	30.27
2012	29.56	30.28	28.96	29.05
2013	29.68	30.20	28.93	29.83
October	29.38	29.49	29.32	29.42
November	29.52	29.65	29.37	29.59
December	29.72	30.03	29.53	29.83
2014				
January	30.14	30.31	29.90	30.31
February	30.31	30.37	30.25	30.29
March	30.40	30.65	30.24	30.45
April (through 18, 2014)	30.17	30.29	29.99	30.17

Sources: Federal Reserve Bank of New York.

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Risk Factors

Risks Relating to Economic Conditions and the Financial Markets

The global credit and financial markets crisis could materially and adversely affect our business and results of operations.

Disruptions in global credit and financial markets may occur that cause 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. 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 duration or extent of disruptions in global credit and financial markets that occurred in and since 2009 and through 2013. These conditions increase the difficulty of accurately forecasting and planning our business activities. If these conditions and uncertainties continue or if credit and financial markets and confidence in economic conditions further 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 cause the market price of our common shares to decline.

Because our business is, and will continue to be, dependent on the requirements of semiconductor companies for independent testing and assembly 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 from our customers and in service fee rates may result in volatility in our revenue and earnings. For instance, during periods of decreased demand for assembled semiconductors, some of our customers may even simplify, delay or forego final testing of certain types of semiconductors, such as dynamic random access memory or DRAM, further intensifying our difficulties. From time to time, the semiconductor industry has experienced significant, and sometimes prolonged, downturns which have adversely affected our results of operations. In 2009, the semiconductor industry, especially the assembly and testing services for DRAM products sector, continued to experience the significant downturn that began in fourth quarter of 2008, and which has adversely affected our business. This industry downturn started to recover from the second quarter of 2009, and our revenue for 2010 increased 42% from 2009 levels. Our revenue for 2011 increased 6% from 2010 levels. Our revenue for 2012 increased 6% from 2011 levels. Our revenue for 2013 increased 0.7 % from 2012 levels and generated a profit of NT$1,335.3 million (US$44.8 million) in 2013. 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 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, 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 testing and assembly services and negatively affect our revenue and earnings. Weak demand for LCD and other flat-panel display products began in 2007 and has since adversely affected our operating results in 2008, 2009, and 2010. The LCD driver market started to recover in the second quarter of 2009 and the positive recovery trend continued through 2013. 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 testing and assembly 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 flat-panel display driver semiconductors may adversely affect our capacity utilization rates and thereby negatively affect our profitability . If we cannot reduce the cost of our testing and assembly services, or introduce higher-margin testing and assembly services for new package types, to offset the decrease in average selling prices for our services,

our earnings could decrease.

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

In recent years, integrated device manufacturers, or IDMs, have increasingly outsourced stages of the semiconductor production process, including testing and assembly, 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, testing and assembly requirements to independent companies. A substantial portion of our revenue is indirectly generated from providing semiconductor assembly and testing services to these IDMs and fabless companies. We cannot assure you that these companies will continue to outsource their testing and assembly 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 testing and assembly markets, we may lose customers and our income may decline.

The semiconductor testing and assembly markets are very competitive. We face competition from a number of IDMs with in-house testing and assembly capabilities and other independent semiconductor testing and assembly 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, Thailand, Vietnam and the Philippines. Any renewed or continued erosion in the prices or demand for our testing and assembly 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 testing and assembly of memory semiconductors accounted for 55% and 50% of our revenue in 2012 and 2013, 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. The continuing oversupply of DRAM products in 2008 and the weak demand in the DRAM market in the period from 2009 to 2013 resulted in significant reductions in the price of DRAM products, which in turn drove down the average prices for our testing and assembly services for DRAM products in these periods. We cannot assure you that there will not be further downturns in DRAM prices in the future.

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

Our testing and assembly services for LCD and other flat-panel display driver semiconductors generated revenue of NT$4,356 million and NT$4,781 million (US$160 million) in 2012 and 2013, respectively. We invested NT$981 million and NT$2,054 million (US$69 million) in 2012 and 2013, 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 testing and assembly services for LCD and other flat-panel display 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 flat-panel display driver semiconductors and related testing and assembly services increased in 2013 compared to the market demand in 2012. Any significant decrease in demand for these products and our related services, however, 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 flat-panel display 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, 2013, we had approximately NT$3,889 million (US$130 million) and NT$3,661 million (US$123 million) outstanding long-term and short-term indebtedness, respectively. Our long-term indebtedness as of December 31, 2013, represented bank loans with an interest rate between 1.73% and 3.1645%. As of December 31, 2013, NT$6,764 million (US$227 million) of our indebtedness was secured by collateral comprised of assets owned by ChipMOS TECHNOLOGIES INC., or ChipMOS Taiwan, ThaiLin Semiconductor Corp., or ThaiLin and ChipMOS TECHNOLOGIES (Shanghai) LTD., or ChipMOS Shanghai.

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;

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- 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;
- our level of indebtedness may make us more vulnerable to economic or industry downturns; and
- our debt service obligations increase our vulnerabilities to competitive pressures, because many of our competitors may be less leveraged than we are.

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 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 testing and assembly services, due to our high percentage of fixed costs;
- changes in prices for our testing and assembly services;
- volume of orders relative to our testing and assembly capacity;
- capital expenditures and production uncertainties relating to the roll-out of new testing or assembly services;
- our ability to obtain adequate testing and assembly 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.

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, and the market value of your investment, may fall.

The ongoing criminal proceeding of and adverse publicity associated with Mr. Shih-Jye Cheng, our Chairman and Chief Executive Officer, and Mr. Hung-Chiu Hu, our former director, could have a material adverse effect on our business and cause our stock price to decline.

Mr. Shih-Jye Cheng, our chairman and chief executive officer, was indicted by the Taipei District Prosecutor s Office, or the prosecutor, in December 2005. Based upon information released by the prosecutor, the indictment alleges that Mr. Shih-Jye Cheng, as instructed by Mr. Hung-Chiu Hu, purchased repurchase notes on January 6, January 13, and January 28, 2004 from Founder Associates Limited, a British Virgin Islands company affiliated with Mega Securities Co., Ltd. (formerly known as Barits International Securities Co., Ltd.), with an aggregate principal amount of approximately US$29 million, by using corporate funds from ChipMOS Taiwan and ThaiLin. The indictment further alleges that these repurchase notes were used as a cover to misuse the corporate funds of Mosel, and its affiliated entities, including ChipMOS Taiwan and ThaiLin, in violation of ROC law. In addition, the indictment alleges that Mr. Hu and others were engaged in the insider trading of the securities of Mosel in violation of ROC law, but none of the current officers at ChipMOS Taiwan or ThaiLin was indicted in this regard.

On January 5, 2006, our board established a special committee to evaluate the circumstances surrounding the indictment of Mr. Cheng. The special committee engaged K&L Gates LLP (formerly Kirkpatrick & Lockhart Preston Gates Ellis LLP) as its independent international legal counsel, Baker & McKenzie as its independent ROC legal counsel, and Ernst & Young (formerly Diwan, Ernst & Young) as its financial advisor to assist in its investigation. As of March 31, 2014, the special committee was solely comprised of Mr. Yeong-Her Wang, our independent director.

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The special committee s investigation focused on (1) the probability that Mr. Shih-Jye Cheng would be convicted on the charges described in the indictment, (2) whether the indictment resulted in any pecuniary or other damage to us, (3) whether there were any internal control weaknesses related to the investments in repurchase notes within ChipMOS Bermuda and its subsidiaries and (4) whether ChipMOS Bermuda is required by applicable laws or the NASDAQ Global Select Market listing requirements to take any action in connection with the indictment. The special committee did not attempt to independently determine whether Mr. Cheng had engaged in any wrongdoing in connection with the investments in repurchase notes, irrespective of whether such wrongdoing would lead to a conviction on the charges under the indictment.

On June 28, 2006, the special committee issued its report, including its findings and recommendations. Based upon the results of its investigation, it found that (1) Mr. Shih-Jye Cheng has declared himself not guilty of the charges described in the indictment, (2) Baker & McKenzie, after reviewing the indictment and the prosecutor s exhibits, has found that the evidence produced by the prosecutor seems to be inadequate and that there is a low probability of the charge of irregular transactions in the indictment being founded, (3) the financial advisor to the special committee has found that we suffered no loss (not taking into account exchange rate factors) and that all monies (capital and interest) were remitted back to our subsidiaries involved, (4) we have suffered no identifiable harm to our reputation or business and (5) Mr. Cheng has not been impaired by the indictment to perform as our chairman and chief executive officer. The special committee recommended that our board maintain Mr. Cheng as our chairman and chief executive officer with full responsibilities and our board unanimously (with Mr. Cheng having recused himself) resolved to accept and adopt the special committee s recommendation with regard to Mr. Cheng. Our board of directors also resolved to continue the role of the special committee for the duration of the ongoing criminal proceeding involving Mr. Cheng to actively monitor any developments of the criminal investigation and take or recommend any appropriate action in light of such developments.

On October 1, 2007, the Taipei District Court found Mr. Shih-Jye Cheng not guilty, and on October 22, 2007, the prosecutor appealed the Taipei District Court decision at the Taiwan High Court. The Taiwan High Court (the High Court) held four trial hearings in 2008, six trial hearings in 2009, six trial hearings in 2010, two trial hearings in 2011, four trial hearings in 2012 and five trial hearings in 2013. On September 3, 2013, the High Court rendered a not guilty verdict for all defendants in the matter, including Mr. Shih-Jye Cheng. On September 18, 2013, the Taiwan High Court Prosecutor s Office has filed a petition for appeal against the decision dated September 3, 2013 to Taiwan s Supreme Court (the Supreme Court). As of the date of this Annual Report on Form 20-F, the matter is now under Supreme Court s assessment and no trial hearing date has been scheduled.

Theoretically, as a result of prosecutor s appeal, the case may revert to High Court and Mr. Cheng may still be convicted of one or more charges in the indictment. In addition, new evidence that leads to additional criminal charges and/or an adverse judgment against Mr. Cheng may be produced during the ongoing criminal investigation, and the special committee may make recommendations to our board in respect of Mr. Cheng s positions with us or our subsidiaries. However, up to the present, no new evidence or charge has been presented or collected by the prosecutor or the Court. Therefore, we are reasonably confident that the non-guilty judgment for Mr. Cheng will be maintained by the Taiwan High Court. If Mr. Cheng is convicted, or in light of any new developments, the special committee may recommend or our board of directors may otherwise decide that it is in the Company s best interests that Mr. Cheng no longer serves in all or some of his current capacities with us or our subsidiaries, or if Mr. Cheng resigns as a result of a final adverse judgment rendered against him by the court, or otherwise, the public perception of us may be seriously harmed and we would lose some or all of the services of Mr. Cheng. In addition, if Mr. Cheng is convicted and sentenced to imprisonment, the ROC Financial Supervisory Commission may subject ChipMOS Taiwan or ThaiLin to certain restrictions on financing activities if Mr. Cheng continues to serve as the chairman or president of ChipMOS Taiwan. Mr. Cheng is very important to our current on-going business operations and our relationships with our customers and financing sources, and our loss of his services due to any adverse publicity from the trial or conviction of Mr. Cheng or other key personnel could materially and adversely affect our business, reputation and prospects and therefore cause our stock price to decline.

We depend 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 depend on a small group of customers for a substantial portion of our business. In 2013, our top five customers, collectively accounted for 56% 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 depend 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 adversely affect our business and profitability.

In the past, our top customers have defaulted on their payment obligations under certain long-term service agreements. For example, ProMOS has defaulted in its payment obligations to us in March 2008. Between the period of November 2008 to May 2009, we revised our contract terms and conditions with ProMOS to include provision of collateral, prepayments and pledges of wafer, Work-In-Process, or WIP, existing finished goods as lien material and secured equipment mortgage for ProMOS payment obligations. ProMOS has been making timely payments since 2012. See Item 4. Information on the Company Customers for more information.

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In January 2009, Spansion defaulted in its payment obligation to us and subsequently filed for a voluntary petition for reorganization under Chapter 11 of the U.S. Bankruptcy Code in March 2009. As a result, ChipMOS Taiwan entered into a definitive Transfer of Claim Agreement to sell to Citigroup Financial Products Inc. (Citigroup) the general unsecured claim reflected in the proof of claim against Spansion. On October 4, 2010, ChipMOS Taiwan entered into a settlement agreement with Spansion LLC for the general unsecured claim on breach of contract and liquidated damages rights reflected in the proof of claim, Claim No. 5, against Spansion Inc., Spansion Technology LLC, Spansion LLC, Spansion International Inc. and Cerium Laboratories LLC filed by ChipMOS Taiwan in the U.S. Bankruptcy Court. In October 2010, the Company received payment of NT$2,118 million under the Transfer of Claim Agreement to Citigroup. See Item 4. Information on the Company Customers for more information.

Since semiconductor companies generally rely on service providers with whom they have established relationships to meet their testing and assembly 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 65% and 57% of our total cost of revenue in 2012 and 2013, respectively. For memory and logic/mixed-signal semiconductor assembly services, our fixed costs represented 21% and 20% of our total cost of revenue in 2012 and 2013, respectively. For LCD and other flat-panel display driver semiconductor testing and assembly services, our fixed costs represented 49% and 45% of our total cost of revenue in 2012 and 2013, respectively. For bumping services, our fixed costs represented 21% and 19% of our total cost of revenue in 2012 and 2013, respectively. Our profitability depends in part not only on absolute pricing levels for our services, but also on the utilization rates for our testing and assembly 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, we have entered into various long-term assembly and testing services agreements with certain of our customers that 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 testing and assembly 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 testing 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 testing equipment and related software. Any significant defect in our testing or conversion software, malfunction in our testing 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;

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.

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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 testing and assembly 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 testing and assembly 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 testing and assembly 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 testing and assembly 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.

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. For more information on litigation in respect of intellectual property rights, see Item 8. Financial Information Legal Proceedings .

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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 testing and assembly 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 testing and assembly 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 testing and assembly equipment on a purchase order basis, which exposes us to changing market conditions and other significant risks. Semiconductor testing and assembly 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. Previously we have committed to acquire certain wafer sorting testers and probers under our long-term service agreement with Spansion. We terminated that agreement and commitment on February 19, 2009, after Spansion defaulted on its payment obligations. Currently, we do not have any long-term service agreements that require our commitment to acquire additional testing and assembly equipment or facilities, however we cannot assure you 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 our operations and increase the number of our 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.

Bermuda law may be less protective of shareholder rights than laws of the United States or other jurisdictions.

Our corporate affairs are governed by our memorandum of association, our bye-laws and laws governing corporations incorporated in Bermuda. Shareholder suits such as class actions (as these terms are understood with respect to corporations incorporated in the United States) are generally not available in Bermuda. Therefore, our shareholders may be less able under Bermuda 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 Bermuda 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 in the United States judgments of United States courts. Appleby, our Bermuda counsel, has advised us that there is some uncertainty as to the enforcement in Bermuda, in original actions or in actions for enforcement of judgments of United States courts, of liabilities predicated upon United States federal securities laws.

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Investor confidence and the market price of our common shares may be adversely impacted if we or our independent public registered accounting firm is unable to conclude that our internal control over our financial reporting is effective as required by Section 404 of the Sarbanes-Oxley Act of 2002.

We are subject to the SEC s reporting obligations, and beginning in our Annual Report on Form 20-F for the year ended December 31, 2006, we have been required by the SEC, as directed by Section 404 of the Sarbanes-Oxley Act of 2002, to include a report of management on our internal control over financial reporting in our Annual Report on Form 20-F that contains an assessment by management of the effectiveness of our internal control over financial reporting. Beginning in fiscal year 2007, our independent public registered accounting firm has audited the effectiveness of our internal control over financial reporting. Although our management concluded that our internal controls are effective in this Annual Report on Form 20-F, and our independent public registered accounting firm has rendered its opinion that we maintained, in all material respects, effective internal control over financial reporting as of December 31, 2013, based on criteria set forth in Internal Control Integrated Framework (1992) issued by Committee of Sponsoring Organization of the Treadway Commission (COSO), our management may not conclude that our internal controls are effective in the future. 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.

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.

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, US dollars and Renminbi, or RMB. In addition, a substantial portion of our capital expenditures, primarily for the purchase of testing and assembly 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, US dollars and RMB. 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.

As part of our growth strategy, we may make acquisitions and investments in companies and businesses, establish joint ventures or make dispositions of our interests. For example, in February 2010, we agreed to sell 15.8% of ChipMOS Taiwan s outstanding shares to Siliconware Precision and the transaction was completed in January 2011. In April 2013, as part of ChipMOS Taiwan s listing plan on the Taiwan Stock Exchange (TWSE), we completed the sale of 6.5 million or 0.8% of the total number of ChipMOS Taiwan s outstanding shares to ChipMOS Taiwan s underwriters and to certain others, including non-US employees of ChipMOS Taiwan. From September to October 2013, we sold 180 million or 21.4% of the total number of ChipMOS Taiwan s outstanding shares to investors. After the completion of the aforesaid sales, the Company held approximately 523 million ChipMOS Taiwan shares, representing 62.1% of the total number of ChipMOS Taiwan s outstanding shares. On April 9, 2014, ChipMOS Bermuda further sold 1.3 million ChipMOS Taiwan shares as green shoe option to market investors. As of the date of this Annual Report on Form 20-F, we continue to own approximately 522 million or 60.4% of ChipMOS Taiwan s outstanding shares. See Item 3. Risk Relating to Our Corporate Structure ChipMOS Taiwan s ability to maintain its listing and trading status on the Taiwan Stock Exchange is dependent on factors outside of the Company or ChipMOS Taiwan s control and satisfaction of stock exchange requirements. ChipMOS Taiwan may not be able to overcome such factors that disrupt its trading status on the main board of Taiwan Stock Exchange or

satisfy other eligibility requirements that may be required of it in the future.

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In November 2012, pursuant to a Registration Statement on Form F-3 declared effective on September 5, 2012, ThaiLin sold 2,000,000 of our common shares under a secondary offering (the Secondary Offering). In May 2013, ThaiLin completed its sale of 380,506 of our common shares to Tokyo Seimitsu Co., Ltd. (Tokyo Seimitsu). In November 2013 and January 2014, ThaiLin sold 2,000,000 and 2,093,705 of our commons shares back to ChipMOS Bermuda, respectively. 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 depend 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 flat-panel display driver semiconductor testing and assembly services, and the competition for such employees in Taiwan and Mainland China 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, 2014, 12.5% 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.

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Risk Relating to Our Relationship with Mosel

ChipMOS Taiwan entered into certain transactions that, if determined to have constituted impermissible financings or purchases of assets or equity of Mosel under ROC law, could result in the resignations of members of our management. As a result, our business operations could be disrupted and the market price of our common shares could decline.

ROC law limits the ability of a company incorporated in Taiwan to purchase any equity interest in companies, directly or indirectly, holding more than 50% of its issued and outstanding voting securities or registered capital or to provide loans or other financing to any company. ChipMOS Taiwan purchased NT$242 million worth of Mosel shares in 2002. Lee and Li, our ROC special counsel, has advised us that these purchases do not violate relevant ROC law that prohibits a subsidiary from buying or taking collateral in shares of companies holding, directly or indirectly, more than 50% of its issued and outstanding voting securities or registered capital, because Mosel s indirect interest (calculated as the product of (i) Mosel s percentage interest in ChipMOS Bermuda and (ii) ChipMOS Bermuda s percentage interest in ChipMOS Taiwan) in ChipMOS Taiwan was less than 50% and ChipMOS Bermuda is incorporated outside of Taiwan. In 2005, ChipMOS Taiwan disposed of NT$84 million of Mosel shares, and in August 2006, ChipMOS Taiwan further disposed of the remaining Mosel shares for approximately NT$30 million. ChipMOS Taiwan no longer owns any Mosel shares. Lee and Li has advised that under relevant ROC law, there is no similar restriction or limitation on a subsidiary s disposal of its parent s equity shares, if the previous acquisitions of such shares complied with relevant ROC law. However, we understand that there is no applicable judicial precedent and there is some doubt as to how a court would rule if presented with the situation.

If it were to be determined that any of the transactions described above constituted an impermissible financing or purchase of assets of Mosel by ChipMOS Taiwan or an impermissible purchase of Mosel s equity by ChipMOS Taiwan, then ChipMOS Taiwan s then chairman and any responsible officers would be jointly and severally liable to ChipMOS Taiwan for any losses suffered by ChipMOS Taiwan and may also be severally liable criminally for any breach of fiduciary duties that resulted in losses and damages suffered by ChipMOS Taiwan. Moreover, certain of these transactions may not have been in full compliance with ChipMOS Taiwan s then applicable internal procedures due to the failure to have received an appropriate valuation opinion prior to entering into such purchases. The failure to comply fully with ChipMOS Taiwan s then applicable internal procedures could constitute evidence of a failure by the then chairman of ChipMOS Taiwan and responsible officers to comply fully with their fiduciary duties, which could result in them being held criminally liable for any breach of fiduciary duties that resulted in losses and damages to ChipMOS Taiwan. If members of our current management were held to have breached their fiduciary duties or become criminally liable for the transactions described above, they may become obliged, whether under law or otherwise, to resign from their respective positions at ChipMOS Bermuda and our affiliates. Any loss of the services of these persons could disrupt our business, damage our reputation, and cause the market price of our common shares to decline.

Risks Relating to Countries in Which We Conduct Operations

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 ChipMOS Bermuda and ChipMOS 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 ChipMOS Shanghai and our financial condition and results of operations.

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ROC laws and regulations previously prohibited any transfer of semiconductor testing and assembly technologies to any person or entity located in Mainland China, except for transfers involving certain low-end semiconductor testing and assembly 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 testing and assembly 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, or the ICM. Under a technology transfer agreement, dated August 1, 2002, ChipMOS Bermuda licensed to ChipMOS Shanghai certain testing and assembly-related technologies that were then controlled by ChipMOS Bermuda, which included technologies that were licensed to ChipMOS Bermuda by ChipMOS Taiwan. ChipMOS Bermuda will continue to license such technologies to ChipMOS Shanghai pursuant to a new technology transfer agreement dated October 3, 2011 with effective date on August 1, 2012. ChipMOS Bermuda also provided ChipMOS Shanghai with technical support and consulting services under this agreement. On April 7, 2004, ChipMOS Bermuda entered into an assignment agreement with ChipMOS Taiwan, pursuant to which ChipMOS Taiwan transferred all of the technologies it owned as of that date to ChipMOS Bermuda, including those previously licensed to ChipMOS Bermuda. On April 12, 2007, ChipMOS Bermuda entered into an assignment agreement with ChipMOS Taiwan, pursuant to which ChipMOS Taiwan assigned and transferred fifty percent of the title to ownership of and interest in all of the technologies and intellectual property it owned as of that date to ChipMOS Bermuda.

In the opinion of Lee and Li, our ROC special counsel, our technology transfer arrangements as described above 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 ChipMOS Taiwan were determined to be in violation of applicable ROC laws and regulations governing technology cooperation with PRC persons and entities, ChipMOS Taiwan may be subject to a fine of between NT$50 thousand and NT$25 million and may be ordered by the ICM to terminate or rectify such activity within a specified period of time. Any termination of our current technology transfer to ChipMOS Shanghai could materially adversely affect our Mainland China operations and our financial condition, results of operations or prospects, as well as the market price of our common shares.

Our ability to direct the operations we conduct through our subsidiaries and 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, certain current consolidated operations are conducted through ChipMOS Taiwan, our 62.1% subsidiary as of March 31, 2014, ThaiLin, ChipMOS Taiwan s 47.5% owned subsidiary as of March 31, 2014, and ChipMOS Shanghai, ThaiLin s wholly-owned subsidiary as of March 31, 2014. We also conduct other activities through our affiliated entities. See also Risk Relating to Our Corporate Structure ChipMOS Taiwan s ability to maintain its listing and trading status on the Taiwan Stock Exchange is dependent on factors outside of the Company or ChipMOS Taiwan s control and satisfaction of stock exchange requirements. ChipMOS Taiwan may not be able to overcome such factors that disrupt its trading status on the main board of Taiwan Stock Exchange 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 .

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 more recently, 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.

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

Our principal executive offices and most of our testing and assembly facilities are located in Taiwan. As a result, our business, financial condition and results of operations and the market price of our common shares may be affected by changes in ROC governmental policies, 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 renegade 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. On March 18, 2014, students and certain civic groups have initiated the Sunflower Student Movement as a protest movement in the Legislative Yuan and, later, also the Executive Yuan of the Republic of China (Taiwan). The activists protested the passing of the Cross-Strait Service Trade Agreement (CSSTA) by the ruling party Kuomintang (KMT) at the legislature without a clause-by-clause review. The protesters perceive the passage of CSSTA failed to meet the required formal procedures and that the ratification of CSSTA with China would hurt Taiwan s economy and leave it vulnerable, among others, to political pressure from Beijing, while the supporters view the trade pact would allow the two sides to conduct business operations more freely in each other s services market. The Sunflower Student Movement marks the first time that legislature has been occupied by citizens in the history of Taiwan. On April 10, 2014, the 24-days occupation of the Legislative Yuan has concluded, however several demonstrations are still continuing.

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.

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 testing services through our facilities in the Hsinchu Industrial Park and the Hsinchu Science Park in Taiwan and the Shanghai Qingpu Industrial Zone, and all of our assembly services through our facilities in the Southern Taiwan Science Park and the Shanghai Qingpu Industrial Zone. 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.

Certain regions we operate in are particularly susceptible to earthquakes and associated natural disasters. For example, in late 1999, Taiwan suffered severe earthquakes which caused significant property damages and loss of life, particularly in the central part of Taiwan. The earthquakes damaged production facilities and adversely affected the operations of many companies involved in the semiconductor and other industries. We experienced an aggregate of NT$8 million in damages to our machinery and equipment, facilities, inventory and five days of delay in production schedule as a result of the event. In March 2011, Sendai of Japan registered an earthquake of 9.0 Mw (moment magnitude scale) off the coast of Japan (the Sendai Earthquake). The Sendai Earthquake was recorded as most powerful earthquake to hit Japan and the fourth most powerful earthquake in the world. The earthquake triggered tsunami warnings and evacuations along Japan s Pacific coast and in at least 20 countries, including Taiwan and Mainland China. In April 2013, an earthquake registering a magnitude of approximately 6.6-7.0 Mw with epicenter located in Lushan County, Ya an, Sichuan (the Lushan Earthquake). ReliefWeb, part of the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) released information on July 23, 2013 confirming 196 deaths and up to 2 persons missing and 14,785 injured victim reports.

In January and February 2008, certain parts of Mainland China, particularly in the southern, central and eastern regions, experienced reportedly the most severe winter in the country in recent decades, which resulted in significant and extensive damages to factories, power lines, homes, automobiles, crops and other properties, blackouts, transportation and communications disruptions and other losses in the affected areas. In addition, in May 2008, certain semiconductor companies with facilities in eastern Mainland China experienced production disruption reportedly due to power outages caused by the failure of certain electricity supply system in the area where the plants are located. We cannot assure you that our facilities in the Shanghai Qingpu Industrial Zone will not be adversely affected by future snowstorms, power outages, earthquakes or other similar events.

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Natural disasters and other events like aforementioned events cause severe property damages to townships, infrastructures and death and injuries to Civilians. In Sendai Earthquake, many electrical generators were disabled, and at least three nuclear power plant reactors partially melted down and experienced a chemical explosion extensively damaging surrounding buildings. We cannot assure you that our production facilities, operations and market located in Taiwan and Mainland China will not be adversely affected as result of the events that take place overseas like the Sendai Earthquake, including radiation emission from the damaged nuclear power plants or subsequent future earthquakes that may take place.

The production facilities of many of our suppliers, customers and providers of complementary semiconductor manufacturing services, including foundries, are located in Taiwan and Mainland China. 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 testing and assembly 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, snowstorm, other natural disaster, industrial strike, industrial accident or other disruptive event occurring in or affecting Taiwan or Mainland China could severely disrupt our normal operation of business and have a material adverse effect on our financial condition and 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 Corporate Structure

Our ability to receive dividends and other payments from our subsidiaries may be restricted by commercial, statutory and legal restrictions, and thereby materially adversely affect our ability to grow, fund investments, make acquisitions, pay dividends, repay or repurchase outstanding indebtedness and otherwise fund and conduct our business.

The ability of our subsidiaries to pay dividends or make other distributions to us is restricted by, among other things, the availability of funds and the terms of various credit arrangements entered into by our subsidiaries, as well as statutory and other legal restrictions. In addition, although there are currently no foreign exchange control regulations which restrict the ability of our subsidiaries located in Taiwan to distribute dividends to us, we cannot assure you that the relevant regulations will not be changed and that the ability of our subsidiaries to distribute dividends to us will not be restricted in the future. A Taiwan company is generally not permitted to distribute dividends or to make any other distributions to shareholders for any year in which it did not have either earnings or retained earnings (excluding reserves). In addition, before distributing a dividend to shareholders following the end of a fiscal year, the company must recover any past losses, pay all outstanding taxes and set aside 10% of its annual profit (less prior years losses and outstanding taxes) as a legal reserve until the accumulated legal reserve equals

its paid-in capital, and may set aside a special reserve.

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In addition, PRC law requires that our PRC-incorporated subsidiary only distributes dividends out of its profit, if any, as determined in accordance with PRC accounting standards and regulations. Under PRC law, it is also required to set aside at least 10% of its after-tax profit each year into its reserve fund until the accumulated legal reserve amounts to 50% of its registered capital. PRC-incorporated companies are further required to maintain a bonus and welfare fund at percentages determined at their sole discretion. The reserve fund and the bonus and welfare fund are not distributable as dividends. Moreover, a ROC-incorporated company is only able to declare dividends at its annual general meeting of shareholders, which cannot occur until after completion of its annual financial statements. Any limitation on dividend payments by our subsidiaries could materially adversely affect our ability to grow, fund investments, make acquisitions, pay dividends, repay or repurchase outstanding indebtedness, and otherwise fund and conduct our business.

Baupost Group LLC/MA and He & Fang 2005 Revocable Living Trust, our two largest shareholders, may have significant influence over our company and may cause us to take actions that may not be, or refrain from taking actions that may be, in our best interest or the best interest of our other shareholders.

As of March 31, 2014, Baupost Group LLC/MA owned 11.0% of our common shares according to the 13G filed by Baupost Group LLC/MA on February 13, 2014. He & Fang 2005 Revocable Living Trust owned 8.7% of our common shares according to the 13G/A filed by He Zhengxu with SEC on January 8, 2014. These two largest shareholders, individually or collectively, through their equity interests may have significant influence over matters submitted to our shareholders for approval and other corporate actions, such as:

- election of directors;
- timing and manner of dividend distributions;
- approval of contracts between us and these two largest shareholders or their respective affiliates, which could involve conflicts of interest;
- open market purchase programs or other purchases of our common shares;
- delay, defer or prevent a change in who controls us;
- discourage bids for our shares at a premium over the market price; and
- adversely affect the market price of our common shares.

Moreover, because large shareholders have potential power to direct or influence our corporate actions, we may be required to engage in transactions that may not be agreeable to our other shareholders or that may not be in the best interest of our other shareholders.

Our ability to make further investments in ChipMOS Taiwan may be dependent on relevant stock exchanges requirements or other regulatory approval requirements. If ChipMOS Taiwan is unable to receive the equity financing it requires, its ability to grow and fund its operations, and as a result our ability to grow and conduct our business, may be materially adversely affected.

Even though trading on the Emerging Stock Board of Gre Tai Securities Market of ChipMOS Taiwan s shares under stock code 8150 commenced on April 19, 2013, ChipMOS Taiwan will continue to depend on its shareholders, ChipMOS Bermuda and Siliconware Precision, to meet its equity financing requirements prior to consummation of its plan of listing on the TWSE. On January 28, 2014, the Review Committee of the TWSE has approved the listing application of ChipMOS Taiwan to be listed on the TWSE and ChipMOS Taiwan subsequently became listed and commenced trading on the main board of TWSE on April 11, 2014. See ChipMOS Taiwan s ability to maintain its listing and trading status on the Taiwan Stock Exchange is dependent on factors outside of the Company or ChipMOS Taiwan s control and satisfaction of stock exchange requirements. ChipMOS Taiwan may not be able to overcome such factors that disrupt its trading status on the main board of Taiwan

Stock Exchange 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 . Any capital contribution by us to ChipMOS Taiwan may require the approval of the relevant stock exchange or other ROC authorities. For example, any capital contribution by us to ChipMOS Taiwan will require the approval of the authorities of the Science Park Administration. We may not be able to obtain any such approval in the future in a timely manner, or at all. If ChipMOS Taiwan is unable to receive the equity financing it requires, its ability to grow and fund its operations, and as a result ChipMOS Bermuda s ability to grow and conduct our business, may be materially adversely affected.

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

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On March 14, 2013, the Board of Directors of ChipMOS Bermuda approved a plan for listing ChipMOS Taiwan on Taiwan s Emerging Stock Board in the second quarter of 2013 and listing ChipMOS Taiwan on the TWSE in the second quarter of 2014. The Company subsequently engaged underwriters to provide assistance to the Company and to ChipMOS Taiwan necessary to accomplish such goals. The trading of shares of ChipMOS Taiwan on Taiwan s Emerging Stock Board of Gre Tai Securities Market under stock code 8150 commenced on April 19, 2013. On January 28, 2014, the Review Committee of the TWSE has approved the listing application of ChipMOS Taiwan to be listed on the TWSE and ChipMOS Taiwan subsequently became listed and commenced trading on the main board of TWSE on April 11, 2014.

Whether requirements can be satisfied for ChipMOS Taiwan s continued trading on the main board of TWSE depends in part on market conditions and other factors not within the control of the Company or ChipMOS Taiwan. For these reasons there can be no assurance that ChipMOS Taiwan s shares will continue to be listed or traded on the TWSE.

Risks Relating to Our Common Shares

Volatility in the price of our common shares 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 may be caused by factors outside of our control and may be unrelated or disproportionate to our results of operations. In the past, following periods of volatility in the market price of a public company s securities, shareholders have frequently instituted securities class action litigation against that company. Litigation of this kind 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.

Our bye-laws provide that our board of directors is divided into three classes of directors, each class to be re-elected only once every three years. As a result, shareholders would not generally be able to replace a majority of the directors until after two annual general meetings. In addition, any extraordinary corporate transaction such as a merger, amalgamation or consolidation, or a sale or transfer of all or substantially all of our assets cannot be done without the approval of shareholders representing 70% of the total voting rights of all shareholders having the right to vote at such general meeting called to consider such extraordinary transaction. These provisions in our constitutive documents may increase the difficulty faced by a party which seeks to acquire control of our board or to approve an extraordinary transaction.

In 2007, we entered into change in control severance agreements with certain executive officers 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 by us or our current shareholders could depress our share price and you may suffer dilution.

Sales of substantial amounts of shares in the public market, the perception that future sales may occur, or the pledge of a substantial portion of our common shares could depress the prevailing market price of our shares. As of March 31, 2014, we had approximately 30 million common shares issued and outstanding. As of March 31, 2014, Baupost Group LLC/MA, He & Fang 2005 Revocable Living Trust, and Siliconware Precision our three largest shareholders, owned 3,283,235, 2,583,637, and 2,243,749 common shares respectively, representing in the aggregate of approximately 27.2% of our outstanding common shares. See Item 7. Major Shareholders and Related Party Transactions Major Shareholders .

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Mosel in the past decided to sell a significant portion of our common shares in order to raise funds. In June 2006, Mosel sold 1,739,130 common shares through its wholly-owned subsidiary, Giant Haven, under a shelf registration statement which has since expired. In addition, in March 2007, we issued 3,043,749 common shares pursuant to a share purchase and subscription agreement with ChipMOS Taiwan and Siliconware Precision, and we entered into a registration rights agreement in March 2007 with Siliconware Precision, pursuant to which we granted to Siliconware Precision certain rights to require us to register these common shares for sale under the Securities Act. In July 2007, Mosel sold 2,030,316 common shares through Giant Haven to ProMOS and Powertech Technology, and we then granted Giant Haven, ProMOS and Powertech Technology certain rights to require us to register these common shares for sale under the Securities Act. For a shareholder that is not our affiliate these shares may be resold pursuant to Rule 144 after lapse of the applicable holding period. In 2008, ProMOS failed to meet its payment obligations to ThaiLin. Subsequently in March 2009, ThaiLin acquired 1,015,158 common shares from ProMOS pursuant to its enforcement of the collateral under a Stock Pledge Agreement between ThaiLin and ProMOS dated December 3, 2008. Furthermore, each of Siliconware Precision, Mosel and ThaiLin may be able to sell, in any three-month period, that number of those ChipMOS common shares that each of Siliconware Precision, Mosel and ThaiLin owns, as the case may be, up to the greater of (i) one percent of our outstanding common shares or (ii) the average weekly trading volume of our common shares as reported on the NASDAQ Capital Market during the four calendar weeks prior to filing a notice under Rule 144(h) for any such sales pursuant to Rule 144(e) under the Securities Act. In November 2012, ThaiLin sold 2,000,000 common shares and Siliconware Precision sold 800,000 common shares pursuant to a Secondary Offering. In May 2013, ThaiLin completed its sale of 380,506 of our common shares to Tokyo Seimitsu. In November 2013 and January 2014, ThaiLin sold 2,000,000 common shares and 2,093,705 commons shares back to ChipMOS Bermuda, respectively. After the transactions, ThaiLin did not hold any of our common shares. From April 2012 to March 2014, Mosel sold 2,267,270 common shares through its wholly-owned subsidiary, Giant Haven, under Rule 144.

On September 14, 2007, ChipMOS Bermuda issued 151,031 common shares pursuant to a share exchange transaction with ChipMOS Taiwan, under which ChipMOS Bermuda exchanged one common share for every 8.4 ChipMOS Taiwan shares then outstanding. Following the completion of the share exchange transaction, ChipMOS Taiwan became our wholly-owned subsidiary. In February 2010, we agreed to sell 15.8% of ChipMOS Taiwan s outstanding shares to Siliconware Precision. In January 2011, the share purchase transaction was completed and we owned 84.2% of ChipMOS Taiwan s outstanding shares as of December 31, 2011. On April 16, 2013, as part of ChipMOS Taiwan s listing plan on the TWSE, we completed the sale of 6.5 million outstanding ChipMOS Taiwan shares or 0.8% of the total number of ChipMOS Taiwan s outstanding shares, at the price of NT$15.0 per share to ChipMOS Taiwan s underwriters for the TWSE listing plan and to certain others, including non-US employees of ChipMOS Taiwan. From September 2, 2013 to October 3, 2013, we sold 180 million shares or 21.4% of the total number of ChipMOS Taiwan s outstanding shares, at the price of NT$20.0 per shares to investors. After the completion of the aforesaid sales the Company held approximately 523 million ChipMOS Taiwan shares, representing 62.1% of the total number of ChipMOS Taiwan s outstanding shares. On April 9, 2014, ChipMOS Bermuda sold approximately 1.3 million ChipMOS Taiwan shares as green shoe option to market investors. As of the date of this Annual Report on Form 20-F, we continue to own approximately 522 million ChipMOS Taiwan shares, representing 60.4% of ChipMOS Taiwan s outstanding shares. See Item 3. Key Information Risk Factors Risk Relating to Our Corporate Structure ChipMOS Taiwan s ability to maintain its listing and trading status on the Taiwan Stock Exchange is dependent on factors outside of the Company or ChipMOS Taiwan s control and satisfaction of stock exchange requirements. ChipMOS Taiwan may not be able to overcome such factors that disrupt its trading status on the main board of Taiwan Stock Exchange or satisfy other eligibility requirements that may be required of it in the future for additional information on ChipMOS Taiwan s listing plan. 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 Share Option Plan and Share Appreciation Rights Plan for a discussion of the Share Option Plan that we have adopted for the benefit of all of our directors, officers, employees and consultants. The issuance of additional shares may have a dilutive effect on other shareholders and may cause the price of our common shares to decrease.

In addition, the indictment relating to Mr. Hung-Chiu Hu alleges that embezzled funds were used in investments by PacMOS Technologies Holdings Limited, or PacMOS, which, as of March 31, 2014, owned 2.5% of our outstanding common shares. As a result, PacMOS may be ordered by relevant authorities to dispose of its investments made with any embezzled funds, which may result in a sale of our shares by PacMOS. A sale of a significant number of our shares by PacMOS or our other current shareholders could depress our share price.

The share numbers disclosed in the foregoing paragraphs are adjusted for the Company s 1-for-every-4 reverse stock split effective on January 21, 2011.

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If the trading price of our common shares declines, we may face a limited public market for our common shares and reduced availability of future debt or equity financing.

Companies listed on the NASDAQ Stock Market (NASDAQ) are subject to delisting for, among other things, failure to maintain a minimum closing bid price of US$1.00 per share for 30 consecutive business days. We are in compliance with the NASDAQ Listing Rules as of the date of this Annual Report on Form 20-F. We were not in compliance with the NASDAQ minimum bid price requirement from September 15, 2009 until May 5, 2010, when we regained compliance. During this time, we applied for, and NASDAQ approved, the transfer of our listing from NASDAQ Global Select Market to NASDAQ Capital Market. If the bid price of our common stock falls below US$1.00 per share for 30 consecutive business days again in the future, we may be subject to delisting. If our common shares are delisted from the NASDAQ Capital Market, our common shares would likely trade in the over-the-counter market, which could make selling our common shares more difficult. Smaller quantities of shares would likely be bought and sold, transactions could be delayed, and security analysts coverage of us may be reduced. In addition, in the event our common shares are delisted, broker-dealers have certain regulatory burdens imposed upon them, which may discourage broker-dealers from effecting transactions in our common shares. These factors could limit our common shares liquidity and result in lower prices and larger spreads in the bid and ask prices for our common shares.

Future declines in our share price could also significantly impair our ability to raise additional necessary capital through equity or debt financing, and could significantly increase ownership dilution to shareholders caused by our issuing equity in financing or other transactions. A general permission under the Exchange Control Act 1972 and the Exchange Control Regulation 1973 (and other relevant legislations and regulations) has been given by the Bermuda Monetary Authority (the BMA) for the issue and transfer of our common shares, notes and other securities to and between non-residents of Bermuda for exchange control purposes, provided that our common shares remain listed on an appointed stock exchange (which includes listing on the NASDAQ Capital Market). There can be no assurance that the BMA will give the same or a similar consent in the event our common shares are no longer listed on the NASDAQ Capital Market or another appointed stock exchange. In the absence of such a general consent, specific consents of the BMA would be required for all issues and transfers of our shares, notes and other securities, unless such issues and/or transfers fall under certain exemptions as provided by the BMA.

Item 4. Information on the Company

Overview of the Company

We believe that we are one of the leading independent providers of semiconductor testing and assembly services. Specifically, we believe that we are one of the leading independent providers of testing and assembly services for LCD and other flat-panel display driver semiconductors in Taiwan and for advanced memory and logic/mixed-signal products in Taiwan and Mainland China. The depth of our engineering expertise and the breadth of our testing and assembly technologies enable us to provide our customers with advanced and comprehensive testing and assembly services. In addition, our geographic presence in Taiwan and Mainland China 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 and Mainland China. Our production facilities are located in Hsinchu and Tainan, Taiwan and Shanghai, Mainland China.

Our Structure and History

We are a holding company, incorporated in August 2000 under the Companies Act 1981 of Bermuda (as amended) (the Bermuda Companies Act), under the name ChipMOS TECHNOLOGIES (Bermuda) LTD . Our principal place of business is located at No. 1, R&D Road 1, Hsinchu Science Park, Hsinchu, Taiwan, Republic of China and our phone number is (+886) 3 563 3988. We provide most of our services in Taiwan through our subsidiary, ChipMOS Taiwan, in which we hold a majority ownership interest, and its subsidiaries and investees. We also provide services in Mainland China through ChipMOS Shanghai, a wholly-owned subsidiary of MODERN MIND TECHNOLOGY LIMITED, or Modern Mind, which is a wholly-owned subsidiary of ThaiLin. As of March 31, 2014, Baupost Group LLC/MA, owned 11.0% of our common shares, He & Fang 2005 Revocable Living Trust, owned 8.7% of our common shares, and Siliconware Precision, owned 7.5% of our common shares and 15.8% of ChipMOS Taiwan s outstanding shares.

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

Notes:

(1) Under IFRSs 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. We consolidated the financial results of ChipMOS Taiwan, ChipMOS USA Inc., or ChipMOS USA, Modern Mind, its wholly-owned subsidiary, ChipMOS Shanghai and ThaiLin.

Below is a description of our principal consolidated subsidiaries:

ChipMOS TECHNOLOGIES INC. ChipMOS Taiwan was incorporated in Taiwan in July 1997 as a joint venture company of Mosel and Siliconware Precision and with the participation of other investors. Its operations consist of the testing and assembly of semiconductors as well as gold bumping and memory module manufacturing. We acquired our interest in ChipMOS Taiwan by issuing our common shares to ChipMOS Taiwan s shareholders in exchange for their 70.3% shareholding in ChipMOS Taiwan in January 2001. In October 2001, ChipMOS Taiwan issued 6,911,732 common shares as employee bonuses. In December 2002, we issued 132,793 common shares in exchange for 5,633,442 ChipMOS Taiwan common shares held by these employees.

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On March 27, 2007, we completed a share purchase and subscription transaction with ChipMOS Taiwan and Siliconware Precision, under which we and ChipMOS Taiwan purchased all of Siliconware Precision s equity interest in ChipMOS Taiwan, and Siliconware Precision subscribed to 3,043,749 of our newly issued common shares through a private placement. As of March 31, 2007, we held 99.1% of the outstanding common shares of ChipMOS Taiwan. On September 14, 2007, we completed a share exchange transaction with ChipMOS Taiwan pursuant to which we exchanged one common share for every 8.4 ChipMOS Taiwan shares. In connection with the share exchange transaction, ChipMOS Bermuda and ChipMOS Taiwan paid in the aggregate NT$53 million in cash to purchase fractional shares and shares held by dissenting shareholders, and ChipMOS Bermuda issued 151,031 new common shares. Following the completion of the share exchange transaction, ChipMOS Taiwan became our wholly-owned subsidiary. In February 2010, we agreed to sell 15.8% of ChipMOS Taiwan s outstanding shares to Siliconware Precision. The share purchase transaction was completed in January 2011. On April 16, 2013, as part of ChipMOS Taiwan s listing plan on the TWSE, we completed the sale of 6.5 million outstanding ChipMOS Taiwan shares or 0.8% of the total number of ChipMOS Taiwan s outstanding shares, at the price of NT$15.0 per share to ChipMOS Taiwan s underwriters for the TWSE listing plan and to certain others, including non-US employees of ChipMOS Taiwan. From September 2, 2013 to October 3, 2013, we sold 180 million shares or 21.4% of the total number of ChipMOS Taiwan s outstanding shares, at the price of NT$20.0 per shares to investors. After the completion of the aforesaid sale, the Company held approximately 523 million ChipMOS Taiwan shares, representing 62.1% of the total number of ChipMOS Taiwan s outstanding shares. On April 9, 2014, ChipMOS Bermuda sold approximately 1.3 million ChipMOS Taiwan shares as green shoe option to market investors. As of the date of this Annual Report on Form 20-F, we continue to own approximately 522 million ChipMOS Taiwan shares, representing 60.4% of ChipMOS Taiwan s outstanding shares. See Item 3. Key Information Risk Factors Risk Relating to Our Corporate Structure ChipMOS Taiwan s ability to maintain its listing and trading status on the Taiwan Stock Exchange is dependent on factors outside of the Company or ChipMOS Taiwan s control and satisfaction of stock exchange requirements. ChipMOS Taiwan may not be able to overcome such factors that disrupt its trading status on the main board of Taiwan Stock Exchange or satisfy other eligibility requirements that may be required of it in the future for additional information on ChipMOS Taiwan s listing plan.

The share numbers disclosed in the foregoing paragraph are adjusted to reflect the Company s 1-for-every-4 reverse stock split effective on January 21, 2011.

MODERN MIND TECHNOLOGY LIMITED and ChipMOS TECHNOLOGIES (Shanghai) LTD. Modern Mind was incorporated in the British Virgin Islands in January 2002. Modern Mind conducts its operations through ChipMOS Shanghai, a wholly-owned subsidiary incorporated in Mainland China in June 2002. ChipMOS Shanghai is engaged in wafer testing and semiconductor assembly and testing. We acquired a 100% equity interest in Modern Mind on December 12, 2002, and then transferred it to Jesper on December 31, 2002. In 2003, we acquired from Jesper a convertible note in the amount of US$37.5 million issued by Modern Mind that may be converted into a controlling equity interest in Modern Mind at a conversion rate of one ordinary share of Modern Mind for every US$1.00 if the repayment is not made when due. In 2004, we restructured our control of ChipMOS Shanghai and our Mainland China operations. On July 29, 2004, we replaced the US$37.5 million convertible note previously issued by Modern Mind in its entirety with a US$62.8 million demand note issued by Modern Mind, with the difference representing a US$25 million loan that we extended to Modern Mind from the net proceeds of our July 2004 offering of common shares. In addition, we extended a loan in the aggregate amount of US$50 million to Modern Mind from the net proceeds of our November 2004 convertible debt offering in exchange for demand notes issued by Modern Mind in the same aggregate amount (the MMT Notes). The MMT Notes were convertible at any time into common shares representing, immediately after the conversion, almost 100% of the then outstanding common shares of Modern Mind at a conversion rate of US$1.00 for each common share of Modern Mind. Payment under the MMT Notes were fully and unconditionally guaranteed by Jesper and secured by a pledge agreement in respect of the entire equity interest in Modern Mind and ChipMOS Shanghai. We obtained from Jesper an irrevocable option to acquire at any time the common shares of Modern Mind then owned by Jesper. Under an assignment and assumption agreement signed on April 22, 2011 (the MMT Assignment Agreement), ChipMOS agreed to sell the MMT Notes to ThaiLin for a purchase price of approximately US$40 million subject to certain closing conditions. Post completion of MMT Assignment Agreement transaction, ThaiLin immediately converted the MMT Notes into common shares of Modern Mind and purchased all of the remaining common shares of Modern Mind from Jesper, with ChipMOS Shanghai becoming a wholly-owned subsidiary of ThaiLin. The MMT Assignment Agreement was completed on October 3, 2011.

On July 1, 2010, ChipMOS Bermuda and ChipMOS Shanghai entered into an exclusive services agreement, pursuant to which ChipMOS Shanghai provides services exclusively to ChipMOS Bermuda or customers designated by ChipMOS Bermuda. Under the exclusive services agreement, ChipMOS Bermuda agrees to procure certain equipment required to render those services and consign such equipment for the exclusive use of ChipMOS Shanghai. The exclusive services agreement has a term of ten years and unless otherwise terminated by either party giving at least 30 days prior written notice to the expiration of such ten-year term, will automatically renew for another ten-year term upon its expiry. In addition, under the exclusive services agreement, ChipMOS Bermuda has the discretion to terminate the exclusive services agreement for any reason at any time by giving 30 days prior written notice to ChipMOS Shanghai.

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ThaiLin Semiconductor Corp. ThaiLin was incorporated in Taiwan in May 1996, and is listed on the Gre Tai Securities Market in Taiwan. It is engaged in the provision of semiconductor testing services. ChipMOS Taiwan acquired a 41.8% interest in ThaiLin in December 2002. Under applicable accounting principles, ThaiLin was consolidated into our consolidated financial statements in 2003 because ChipMOS Taiwan was deemed to exert significant control over ThaiLin through common directors and management.

On March 4, 2008, ChipMOS Taiwan made a loan in an amount of NT$145 million that bears interest at a rate of 4.69% per annum to Taiwan Kolin Co. Ltd., or Kolin, a major shareholder of ThaiLin, ChipMOS Taiwan s 42.9% owned subsidiary. NT$15 million of this loan was repaid in 2008. The loan is secured by a pledge by Kolin of 11 million common shares of ThaiLin. In 2013, the loan has been fully repaid and the subject pledge has been released accordingly. See Item 7. Major Shareholders and Related Party Transactions Related Party Transactions ThaiLin Semiconductor Corp.

As of March 31, 2014, ChipMOS Taiwan held a 47.5% interest in ThaiLin. Mr. Shih-Jye Cheng, our chairman and chief executive officer and the director and chairman of ChipMOS Taiwan, is also a director of ThaiLin. In addition, four of the nine directors of ThaiLin are appointed by ChipMOS Taiwan. As of March 31, 2014 ThaiLin did not hold any of our outstanding shares. See Item 7. Major Shareholders and Related Party Transactions Related Party Transactions ThaiLin Semiconductor Corp.

Industry Background

We provide a broad range of back-end testing services, including engineering testing, wafer probing and final testing of memory and logic/mixed-signal semiconductors. We also offer a broad selection of leadframe-based 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 or fine-pitch BGA. In addition, we provide gold bumping, testing and assembly services for LCD and other flat-panel display 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 and personal digital assistants, or PDAs, communications equipment, such as cellular handsets, and consumer electronic products and display applications, such as flat-panel displays. In 2013, 23.7% of our revenue was derived from testing services for memory and logic/mixed-signal semiconductors, 32.4% from assembly services for memory and logic/mixed-signal semiconductors, 24.7% from LCD and other flat-panel display driver semiconductor testing and assembly services and 19.2% from bumping services for semiconductors.

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 end of 2000 that was followed by a modest recovery in late 2002. Beginning in the fourth quarter of 2008, the semiconductor industry commenced another downturn that increased in unprecedented severity into the first quarter of 2009. The overall semiconductor industry commenced to recover from the downturn in the second quarter of 2009 and the positive recovery trend continues through 2013.

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, and the LCD and other flat-panel display driver semiconductor market.

Memory Semiconductor Market

The potential for memory market growth is linked to anticipated memory content increases in consumer electronics 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, and other mobile applications.

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LCD and Other Flat-Panel Display Driver Semiconductor Market

Flat-panel displays are used in applications such as PC monitors, notebook computers, television sets, cellular handsets and digital cameras. The end-user demand for LCD and other flat-panel display driver semiconductor experienced a downturn in 2007 and 2008. The LCD driver market started to recover in the second quarter of 2009 and the positive recovery trend continued through 2013.

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 controllers 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:

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.

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Outsourcing Trends in Semiconductor Manufacturing

Historically, integrated device manufacturers, or 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 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 testing and assembly 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. We believe that many of these IDMs are significantly reducing their investments in new semiconductor testing and assembly 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, testing and assembly requirements to independent companies.

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

Significant Capital Expenditure Requirements. Driven by increasingly sophisticated technological requirements, wafer fabrication, testing and assembly 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 shortening, magnifying the need to continually upgrade or replace manufacturing, testing and assembly equipment to accommodate new products. As a result, new investments in in-house fabrication, testing and assembly 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. Independent foundry, testing and assembly companies, on the other hand, are able to realize the benefits of specialization and achieve economies of scale by providing services to a large base of customers 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, testing and assembly 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, testing and assembly services.

Semiconductor Testing and Assembly Services Industry

Growth in the semiconductor testing and assembly 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 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 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.

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Mainland China has emerged as a similarly attractive location for outsourced semiconductor manufacturing. Mainland China is an attractive manufacturing location for electronic products because companies can take advantage of a well-educated yet low-cost labor force, cost savings due to tax benefits and a large domestic market. These factors have driven increased relocation of much of the electronics industry manufacturing and supply chain to Mainland China. An increasing number of global electronic systems manufacturers and contract manufacturers are relocating or have relocated production facilities to Mainland China. We believe that these electronic product manufacturers and contract manufacturers will source an increasing portion of their demand for semiconductors from semiconductor suppliers located in Mainland China in order to reduce production cycle times, decrease costs, simplify supply chain logistics and meet local content requirements. In line with this trend, we have in recent years expanded our operations in Mainland China.

Our Strategy

Our goal is to reinforce our position as a leading independent provider of semiconductor testing and assembly services, concentrating principally on memory, logic/mixed-signal and LCD and other flat-panel display 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 testing and assembly services for potential growth segments of the semiconductor industry, such as memory, logic/mixed-signal, LCD and other flat-panel display 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 differentiated service from 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 testing and assembly requirements of these key semiconductor market segments.

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

Critical to our business growth is the continuation to expand our capabilities in testing and assembly to provide better 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 testing and assembly of fine-pitch COFs. We have also introduced low cost metal composite bump (MCB) products based on our proprietary Cu plating technology to service flat-panel display 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 2014 we expect to focus our research and development efforts in the following areas:

- development of advanced assembly technologies in WLCSP, MEMS and flip chip products for memory devices and mixed signal products;
- expand fine-pitch Au and Cu bumping technology for 300mm products;
- expand fine-pitch test capabilities for advanced LCD drivers;
- 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 the lead and halogen elements from the materials.

In 2013, we spent approximately 2.9% 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, 2014, our research and development team comprised 353 persons.

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Build on Our Strong Presence in Taiwan and Expand Our Operations 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.

As with our operations in Taiwan, we intend to similarly benefit from our operations in Mainland China. We intend to invest in and expand our operations in Mainland China, increasing our testing and assembly services for memory and logic/mixed-signal semiconductors.

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 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.

Through ChipMOS Taiwan, ThaiLin and ChipMOS Shanghai, we are able to offer vertically integrated services for a broad range of products, including memory, logic/mixed-signal and LCD and other flat-panel display driver semiconductors. We believe that these affiliations, which offer complementary technologies, products and services as well as additional capacity, 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 testing and assembly 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 currently have 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 continuing into 2013. Beginning in 2008, 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.

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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,	
	2012	2013
Testing		
Memory testing revenue	26.3%	20.5%
Logic/mixed-signal testing revenue	2.6	3.2
Total testing revenue	28.9	23.7
Assembly		
Memory assembly revenue	28.7	29.1
Logic/mixed-signal assembly revenue	4.5	3.3
Total assembly revenue	33.2	32.4
LCD and other flat-panel display driver semiconductor testing and assembly revenue	22.7	24.7
Bumping	15.2	19.2
Total revenue	100.0%	100.0%

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 multi-site testing, which can test up to 256 devices simultaneously. The memory semiconductors we test are used primarily in desktop computers, notebook computers and 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 operating frequencies 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, or 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 analyses.

Software Program Development. Design and test engineers develop a customized software program and related hardware to test semiconductors on advanced testing 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 prototype semiconductor complies with 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.

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Wafer Probing. Wafer probing is the step immediately before the assembly of semiconductors and involves visual inspection and electrical testing of the processed wafer for defects 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 processing.

Laser Repairing. In laser repairing of memory products, specific poly or metal fuses are blown after wafer probing to enable a spare row or column of a memory cell 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 stress to ensure that finished products will survive a long period of end-user service. This process is used only for memory products.

Top Marking. By using either a laser marker or an ink marker, we mark products according to our customers specifications, including the logo, product type, 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 minus 45 degrees celsius to 85 degrees celsius. One of the tests includes speed testing to classify the parts into different speed grades.

Final Inspection and Packing. Final inspection involves visual or auto-inspection of the devices to check for any bent leads, inaccurate markings or other construction defects. Packing involves dry packing, packing-in-tube and tape and reel. Dry pack involves heating semiconductors in a tray at 125 to 150 degrees celsius for about two hours to remove the moisture before the semiconductors are vacuum-sealed in an aluminum bag. Packing-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:

Wafer Lapping	The wafers are ground to their required thickness.
Die Saw	Wafers are cut into individual dies, or chips, in preparation for the die-attach process.
Die Attach	Each individual die is attached to the leadframe or organic substrate.
Wire Bonding	Using gold wires, the I/O pads on the die are connected to the package inner leads.
Molding	The die and wires are encapsulated to provide physical support and protection.
Marking	Each individual package is marked to provide product identification.
Dejunking and Trimming	Mold flash is removed from between the lead shoulders through dejunking, and the dambar is cut during the trimming process.
Electrical Plating	A solderable coating is added to the package leads to prevent oxidization and to keep solder wettability of the package leads.
Ball Mount and Reflow	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.
Forming/Singulation	Forming involves the proper configuration of the device packages leads, and singulation separates the packages from each other.

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.

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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.

Package	Lead-count	Description	End-User Applications
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

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.

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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:

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

Package	Connections	Description	End-User Applications
Mini BGA	36-400	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	54-90	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)	44-52	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	48-137	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

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Wafer Level CSP

Wafer-level CSP (WL CSP) is the technology of packaging an integrated circuit at wafer level. WL CSP is essentially a true chip scale package (CSP) technology, since the resulting package is practically of the same size as the die. WL CSP 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. WL CSP involves the RDL, wafer solder bumping, while still in the wafer, and then wafer dicing. Benefits of WL CSP 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
WL CSP	8-30	Very small package size (identical to die size), suitable for the low pin count and require the small package size application.	Memory, ASICs, 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 wirebond 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	8-100	Superior electrical performance, smaller form factor.	Power device, RF, Logic/Analog device, wireless or portable application.

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LCD and Other Flat-Panel Display Driver Semiconductors and Gold Bumping

We also offer testing and assembly services for LCD and other flat-panel display driver semiconductors. We employ TCP, COF and COG technologies for testing and assembling LCD and other flat-panel 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 flat-panel display 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 flat-panel display 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 flat-panel display 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 thermoset 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 testing and assembly 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 the liquid crystal module, or LCM, in certain applications. LCM is mainly employed in handheld electronics, such as PDAs and cellular handsets.

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 flat-panel displays. 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 nowadays, referring to the trend of the last several years, the avg. inner lead pitch of COF package went down to 25um with about 40% of market share. 22 um inner lead pitch of COF package has been released to mass production in these two years.

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The following diagram presents the basic components of a COF:

The TCP and COF processes involve the following steps:

Chip Probing	Screen out the defect chips which fail to meet the device spec.
Wafer Lapping	Wafers are grounded to their required thickness.
Die Saw	Wafers are cut into individual dies, or chips, in preparation for inner lead bonding.
Inner Lead Bonding	An inner lead bonder machine connects the chip to the printed circuit tape.
Potting	The package is dispensed a resin.
Potting Cure	The potting cure process matures the resin used during the potting oven with high temperatures.
Marking	A laser marker is used to provide product identification.
Final Testing	To verify device spec. within electrical testing after assembly process.
Inspection and Packing	Each individual die with tape is visually 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 increasingly in assembling LCD and other flat-panel display driver semiconductors for communications equipment. 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 display of smart phone market, it integrates source, gate driver of TFT-LCD driver IC and Timing Controller IC into one chip, so the output channel is larger than TCP or COF products.

The COG assembly technology involves the following steps:

Chip Probing	To screen out the defect chips which fail to meet the device spec.
Wafer Lapping	Wafers are ground to their required thickness.
Die Saw	Wafers are cut into individual dies, or chips, in preparation for the pick and place process.
Auto Optical Inspection	Process of wafer inspection is detecting defect to separate chips at pick and place station.
Pick and Place	Each individual die is picked and placed into a chip tray.
Inspection and Packing	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.

Gold bumping technology, which can be used in TCP, COF and COG technologies, is a necessary interconnection technology for LCD and other flat-panel display 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

flat-panel display driver semiconductors or other chips that require thin packaging profiles. In addition to the gold bumping, we also offer the WLCSP, Cu RDL and Cu pillar service which can be applied for FC CSP and/or QFN package. The product scope includes but is not limited to flash and power devices.

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The gold bumping fabrication process uses thin film metal deposition, photolithography and electrical plating technologies. 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. UV exposure and developing processes open the photoresist material, which defines the bump shape. The gold bump is 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. The gold bump 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 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 testing and assembly 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 recommend 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 testing and assembly technologies;
- our strong capabilities in testing and assembling LCD and other flat-panel display 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, in each of 2012, 2013 and 2014, respectively, was 85, 90 and 83. Our top 15 customers in terms of revenue in 2013 were (in alphabetical order):

Elite Semiconductor Memory Technology Inc.

Etron Technology, Inc.

Fidelix Co., Ltd.

Himax Technologies, Inc.

ILI TECHNOLOGY CORP.

Integrated Circuit Solution Inc.

Macronix International Co., Ltd.

Micron Technology, Inc., or Micron

Novatek Microelectronics Corp., or Novatek

Orise Technology Co., Ltd.

Raydium Semiconductor Corporation

Renesas Electronics Corporation

Spansion LLC

Winbond Electronics Corporation, or Winbond

Zentel Electronics Corp.

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In 2012, our largest customer was Novatek, our second-largest customer was Micron and our third-largest customer was Winbond accounting for approximately 21%, 14% and 8% of our revenue, respectively. In 2013, our largest customer was Novatek, our second-largest customer was Micron and our third-largest customer was Winbond accounting for approximately 20%, 15% and 8% 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.

In 2006 and 2007, we strategically entered into or extended certain long-term agreements with some of our key customers, including a reputable memory customer based in the US, under which we reserved capacity for the customers primarily and the customer committed to place orders in the amount of the reserved capacity (which is subject in certain cases to reduction by the customer).

Pursuant to the long-term service agreement we have entered into with ProMOS in July 2007, ProMOS agreed to provide us with six month rolling forecast on testing and assembly service orders to be placed to us, and ProMOS guarantees that such orders will represent no less than certain percentage of ProMOS total production volume of these products (excluding OEM products). In January 2008, at the request of ProMOS, we agreed to permit ProMOS to defer payment of aggregate service fees of NT$450 million to February 15, 2009. The deferred service fees, bore an interest at a rate of 4.69% per annum, was recorded as long-term accounts receivables as of December 31, 2007, and were paid in full by ProMOS in March and April 2008. In March 2008, ProMOS failed to place orders in the amount of the reserved capacity and failed to meet its payment obligations under the long-term service agreement. In November 2008, we entered into a revised subcontracting contract with ProMOS by requiring ProMOS to provide wafers with a value of 80% of the subcontracting fee as collateral. In May 2009, a further revised subcontracting contract was entered into by and between us and ProMOS under which ProMOS provided us with wafer as pledge and Work-In-Process, or WIP and existing finished goods as lien material. Part of ProMOS receivables will be recovered through sales of the pledged wafer and lien material back to ProMOS with a discount to market price, and the remaining outstanding accounts receivables will be secured by equipment mortgage under the same contract arrangement. Effective March 2009, we started to request prepayment from ProMOS. As of December 31, 2009, other receivables from ProMOS amounted to NT$409 million and 100% allowance was made by ChipMOS Taiwan. NT$7 million was received by April 2010. Under the amended subcontracting contract, ProMOS paid ChipMOS Taiwan NT$200 million in May 2010. The remaining NT$202 million was paid in nine monthly installments with final installment payment ended on March 15, 2011. As of December 31, 2010, ChipMOS Taiwan received NT$336 million and the related allowance of NT$409 million was reversed to other non-operating income. In March 2011, all payments have been received. The collection term was revised to 30 days upon delivery in May 2010, to 45 days upon delivery in October 2010 and to the current term of advance payment prior to delivery from ProMOS in June 2011.

As of December 31, 2009, other receivables from ProMOS amounted to NT$55 million and 100% allowance was made by ThaiLin. In June 2010, ThaiLin agreed a settlement with ProMOS in the amount of NT$24 million and it was collected during the same year. The allowance of NT$24 million was reversed to other non-operating income. Commencing in June 2010, the collection term was revised to become 30 days upon delivery. In January 2011, the collection term was revised to 45 days after delivery and it was further revised to request advance payments from ProMOS in June 2011.

Pursuant to the long-term service agreement we have entered into with Spansion in September 2005, Spansion agreed to provide us with six month rolling forecast on testing and assembly service orders to be placed to us. In January 2009, Spansion defaulted on its payment obligations under the long-term service agreement and we subsequently terminated the long-term service agreement with Spansion on February 19, 2009. Our service fee receivable from Spansion in connection with its default amounted to NT$1,539 million. On March 1, 2009, Spansion filed for a voluntary petition for reorganization under Chapter 11 of the U.S. Bankruptcy Code. Subsequent to such filing, on March 16, 2009, ChipMOS Taiwan was elected as the co-chairman of the Unsecured Creditor Committee to represent unsecured creditors in Spansion s efforts to reorganize its debts under Chapter 11 petition. In early January 2010, ChipMOS Taiwan resigned as a member of the Unsecured Creditor Committee.

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On January 25, 2010, ChipMOS Taiwan entered into a definitive Transfer of Claim Agreement to sell to Citigroup the general unsecured claim reflected in the proof of claim against Spansion Inc., Spansion Technology LLC, Spansion LLC, Spansion International Inc. and Cerium Laboratories LLC (collectively, Spansion) filed by ChipMOS Taiwan in U.S. Bankruptcy Court. The claim that is the subject of the Transfer of Claim Agreement includes accounts receivable for testing and assembly services provided to Spansion in the amount of approximately US$66 million to US$70 million (the Undisputed Claim). ChipMOS Taiwan received the purchase price for the Undisputed Claim of NT$1,118 million in February 2010 from Citigroup. The Transfer of Claim Agreement also includes the sale of breach of contract and liquidated damages rights against Spansion in the amount of approximately US$234 million (the Damages Claim). The purchase price for the Damages Claim is expected to be an amount that will be determined based on a purchase rate of 50.2% multiplied by the portion of the Damages Claim that is allowed by a final adjudication of the U.S. Bankruptcy Court. The purchase price for the Damages Claim is payable to ChipMOS Taiwan to the extent that the Court allows this claim. In furtherance of the Transfer of Claim Agreement, the Company also has entered into an agreement to subscribe for, purchase and transfer to Citigroup rights offering shares to be issued by Spansion according to the Second Amended Joint Plan of Reorganization filed in U.S. Bankruptcy Court. This agreement provides that Citigroup will pay to the Company the amount of the rights offering shares purchase price. On October 4, 2010, ChipMOS Taiwan entered into a settlement agreement with Spansion LLC for the general unsecured claim on breach of contract and liquidated damages rights reflected in the proof of claim, Claim No. 5, against Spansion Inc., Spansion Technology LLC, Spansion LLC, Spansion International Inc. and Cerium Laboratories LLC filed by ChipMOS Taiwan in the U.S. Bankruptcy Court. In October 2010, the Company has received payment of NT$2,118 million for the Transfer of Claim Agreement to Citigroup.

On April 22, 2010, the Company announced that Spansion LLC and ChipMOS Taiwan entered into a two-year wafer sort services agreement, utilizing the V5400 test platform, making ChipMOS Taiwan Spansion s exclusive wafer sort subcontractor, except for any sort equipment operated by Spansion LLC or currently located at Spansion Japan Limited. The wafer sort services agreement became effective upon the effective date of Spansion s confirmed plan of reorganization. The U.S. Bankruptcy Court confirmed Spansion s Second Amended Plan of Reorganization on April 16, 2010. The effective date of Spansion s plan of reorganization is May 10, 2010. The wafer sort services agreement became effective on May 10, 2010 and has since been renewed twice for expiring in 2016.

Beginning in 2008, we also resumed a focus 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,	
	2012	2013
Taiwan	71%	72%
Singapore	14	15
United States	7	4
Japan	3	3
Korea	2	3
Hong Kong SAR	2	1
Others	1	2
Total	100%	100%

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.

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Sales and Marketing

We maintain sales and marketing offices in Taiwan, Mainland China and the United States. Our sales and marketing strategy is to focus on memory semiconductors in Taiwan, Japan, Korea and the United States, logic/mixed-signal semiconductors in Taiwan, Japan and the United States, LCD and other flat-panel display driver semiconductors in Japan, Taiwan, Hong Kong and Mainland China. As of March 31, 2014, our sales and marketing efforts were primarily carried out by teams of sales professionals, application engineers and technicians, totaling 35 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 testing and assembly 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 analyses to understand the application and assembly technology evolution, such as analysis on mobile handsets and CD-/DVD-ROM players. 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 testing and assembly 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 the United States, Japan and 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 1.0% to 3.5% of our revenue from services for memory semiconductors in the United States, Japan and Korea. In 2012 and 2013, we paid approximately NT$5 million and NT$9 million (US$302 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 2012 and 2013, we spent approximately NT$505 million, or 3% and NT$565 million (US$19 million), or 3%, 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 testing and assembly 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:

- Grew wafer level BIST testing capability;
- Developed one touchdown full contact testing capability for 200mm and 300mm wafers ;
- Ramped up high frequency testing capability for LCDD;
- Built up fine pitch testing capability for 12um bump pitch products; and

Developing centralized server test control system.

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

Low-cost alloy wire bonding alternatives for Cu wirebond;

Au height reduction, as part of cost reduction drive, 10um bump height COF package was released for production;

Wafer-level chip scale packaging and Cu RDL processes;

Flip-chip QFN for power IC applications;

Cu pillar bumping and assembly;

MEMS packages for mobile devices;

Multi-chip assembly and module of flash products for SSD and eMMC applications;

Stacked-die chip scale package;

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Thin wafer lapping and dicing;

Advanced thin core/core-free substrate for thin packages; and

Qualified thermally enhanced COF and MCB (metal composite bump) COF and released for manufacturing.

For new product and product enhancement work in 2014, our work concentrates on three key development programs: WLCSP, MEMS 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. 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.

In 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 2014, we will continue to work on improvements of wafer thinning and polishing operations facilitate the expansion of multi-chip NAND packages offerings. 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, 2014, we employed 353 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 was established, aimed at expanding capability for material selection and inspection to support flip chip introduction and various resin characterizations. A new analytical laboratory has been builted 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 testing and assembly 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, 2014, we employed 389 personnel for our quality control activities. Our quality control staff typically includes engineers, technicians and other employees who monitor testing and assembly 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 ISO/TS 16949 quality system certification. 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 2000. ThaiLin and ChipMOS Shanghai also obtained ISO/TS 16949 quality system certification in September 2005 and January 2006, respectively.

ISO/TS 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 9002 certification is required by many countries for sales of industrial products.

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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. ChipMOS Shanghai also obtained SONY Green Partner (Tier 2) certification through its ISSI channel in 2008. Our laboratories have also been awarded Chinese National Laboratory accreditation under the categories of reliability test, electricity and temperature calibration.

Our testing and assembly 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 2013, we achieved monthly assembly yields of an average of 99.95% for our memory and logic/mixed-signal assembly packages, 99.97% for our COF packages, 99.92% for our COG packages and 99.90% 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 flat-panel display driver semiconductor testing and assembly process include carrier tape, resin, spacer tape, plastic reel, aluminum bags, and inner and outer boxes. Cost of raw materials represented 25% and 23% of our revenue in 2012 and 2013, 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. In addition, since the commencement of economic downturn in second quarter of 2008, due to the volatility of the semiconductor market, several of our principal suppliers have also ceased to stock inventories to be reserved to meet its customers production requirements. Instead, our suppliers now require longer lead time for delivery of our supply orders. 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.

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Competition

The independent testing and assembly markets are very competitive. Our competitors include large IDMs with in-house testing and assembly capabilities and other independent semiconductor testing and assembly companies, especially those offering vertically integrated testing and assembly services, such as Advanced Semiconductor Engineering Inc., Amkor Technology, Inc., Chipbond Technology Corporation, King Yuan Electronics Co., Ltd., Powertech Technology Inc., Siliconware Precision, STATS ChipPAC 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 flat-panel display driver semiconductor assembly services;
- quality of service;
- capacity;
- location; and
- price.

IDMs that use our services continually evaluate our performance against their own in-house testing and assembly 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, 2014, we held 419 patents in Taiwan, 147 patents in the United States, 226 patents in the People s Republic of China and 1 patent in the United Kingdom, France and Germany, respectively, relating to various semiconductor testing and assembly technologies. These patents will expire at various dates through to 2032. As of March 31, 2014, we also had a total of 29 pending patent applications in the United States, 75 in Taiwan, 62 in the People s Republic of China, 3 in Europe, 3 in Japan, and 3 in the Republic of Korea. 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 and Item 8. Financial Information Legal Proceedings .

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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 process generates stationary acid and alkali and VOC pollution, principally at the plating stages. Liquid waste is produced when silicon wafers are ground thinner and diced into chips with the aid of diamond saws and cleaned with running water and during the gold bumping process generates stationary acid, alkali, liquid waste and VOC pollutions. In addition, excess material on lead-frames and moldings are removed from assembled semiconductors in the trimming and dejunking processes, respectively. We have installed various types of wastewater and air pollutants treatment equipments at our semiconductor assembly and gold bumping facilities. Since 2001, we have adopted certain environmentally-friendly production management systems, and have implemented certain measures intended to bring our assembly process in compliance with the Restriction of Hazardous Substances Directive 2002/95/EC issued by the European Union and our customers. We believe that we have adopted adequate and effective environmental protection measures that are consistent with semiconductor industry practices in Taiwan and Mainland China. 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 and Mainland China 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 further certified as meeting the OHSAS18001 standards, of the International Organization for Standardization. Our facilities at Hsinchu Science Park, Chupei and Southern Taiwan Science Park have won numerous awards including Green Building Label in 2013, health promotion awards granted by Department of Health of ROC in 2012, Safety & Health Performance Certification Unit from Council of the Labor Affairs of ROC in 2009 and 2010. Our bumping facility has won Civil Defence Excellent Award from Hsinchu City in 2009, 2010, 2011 and 2012. We continue to encourage our employees to attend and participate in community environmental campaigns and events to promote and build better environmental friendly practices.

We will continue to implement programs, measures and related training to reduce industrial waste, save energy and control pollution. In 2001, ChipMOS Taiwan completed a lead-free process control program, which offers a lead-free method in a semiconductor package, a lead-free plating, a lead-free solder ball and a lead-free reliability method and specification. In 2005, ChipMOS Shanghai completed a similar lead-free process control program. In 2003 and 2008, ChipMOS Taiwan and ChipMOS Shanghai obtained Green Partner certification from Sony Corporation of Japan, respectively. The Green Partner program requires external suppliers to meet SONY s Green Partner requirements. In 2009 and 2013, we further obtained SGS recognition and received the Greenhouse Gas Verification Statement and Carbon footprint Verification Statement , respectively. The SGS recognitions affirm our eligibility under the Green Partner program and more importantly our commitments towards becoming a green, environmental friendly entity. Standardizing on green, environmentally friendly products, production facilities and management systems, which has become an industry trend, and to many companies, is a key criteria in selection of their service providers.

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 ChipMOS Taiwan and ThaiLin is approximately NT$55,745 million and NT$6,964 million, respectively. ChipMOS Shanghai also maintains property insurance policies for a maximum coverage of approximately RMB923 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.

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Taxation

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

Facilities

We provide testing services through our four facilities in Taiwan and one facility in Shanghai, with one facility at each of the following locations: Chupei, the Hsinchu Industrial Park, the Hsinchu Science Park, the Southern Taiwan Science Park and the Shanghai Qingpu Industrial Zone. We provide assembly services through our facility at the Southern Taiwan Science Park and our facility at the Shanghai Qingpu Industrial Zone. We own the land for our Hsinchu Industrial Park testing facility and Chupei facility and possess the land use right to the land on which our Shanghai Qingpu Industrial Zone facility is located until 2052, and, we lease two parcels of land for our Hsinchu Science Park testing facility with lease expiration in year 2017 and 2027, respectively, and two parcels of land for our Southern Taiwan Science Park facility with lease expiration in year 2017 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, 2014.

Location of Facility	Primary Use	Floor Area (m^2)	Principal Equipment
Chupei, Hsinchu	Testing/Gold Bumping	38,122	7 steppers
			18 sputters
			279 testers
Hsinchu Industrial Park, Taiwan	Testing	27,123	97 testers
			32 burn-in ovens
Hsinchu Science Park, Taiwan	Testing	31,168	143 testers
			94 burn-in ovens
Southern Taiwan Science Park,	Assembly/Testing	146,180	781 wire bonders
Taiwan			137 inner-lead bonders
			362 testers
Shanghai Qingpu Industrial Zone,	Assembly/Testing	66,817	25 testers
Mainland China			189 wire bonders
			23 burn-in ovens

Equipment

Testing of Memory and Logic/Mixed-Signal Semiconductors

Testing equipment is the most capital-intensive component of the memory and logic/mixed-signal semiconductors testing business. Upon the acquisition of new testing equipment, we install, configure, calibrate and perform burn-in diagnostic tests on the equipment. We also establish parameters for the testing equipment based on anticipated requirements of existing and potential customers and considerations relating to market trends. As of March 31, 2014, we operated 544 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 manufacturer, Advantest Corporation.

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 testing 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 testing 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.

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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, 2014, we operated 970 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, Testing and Assembly of LCD and Other Flat-Panel Display 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., Shinkawa Co., Ltd., Athlete FA Corp., Daitron Electron Corp. and GMM Corp. As of March 31, 2014, we operated 7 steppers and 18 sputters for gold bumping, 137 inner-lead bonders for assembly and 362 testers for LCD and other flat-panel display driver semiconductors. We are currently in the process of purchasing additional testing equipment. The testing 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 testing services, including wafer probing and final testing of memory and logic/mixed-signal semiconductors. We also offer a broad selection of leadframe-based 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. In addition, we provide gold bumping, testing and assembly services for LCD and other flat-panel display driver semiconductors by employing TCP, COF and COG technologies. In 2013, our consolidated revenue was NT$19,362 million (US$649 million) and our profit for the year attributable to equity holders of the Company was NT$1,335 million (US$45 million).

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We are a holding company, incorporated in Bermuda on August 1, 2000. We provide most of our services through our majority-owned subsidiary, ChipMOS Taiwan, and its subsidiaries and investees. ChipMOS Taiwan was incorporated in Taiwan in July 1997 as a joint venture company of Mosel and Siliconware Precision and with the participation of other investors. Following the completion of the share exchange transaction between ChipMOS Bermuda and ChipMOS Taiwan on September 14, 2007, ChipMOS Taiwan became a wholly-owned subsidiary of ChipMOS Bermuda. In February 2010, we agreed to sell 15.8% of ChipMOS Taiwan s outstanding shares to Siliconware Precision. The share purchase transaction was completed in January 2011. As part of ChipMOS Taiwan s listing plan on the TWSE, on April 16, 2013, we completed the sale of 6.5 million outstanding ChipMOS Taiwan shares or 0.8% of the total number of ChipMOS Taiwan s outstanding shares, at the price of NT$15.0 per share to ChipMOS Taiwan s underwriters for the TWSE listing plan and to certain others, including non-US employees of ChipMOS Taiwan. Also, from September 2, 2013 to October 3, 2013, we completed another sale of 180 million outstanding ChipMOS Taiwan shares or 21.4% of the total number of ChipMOS Taiwan s outstanding shares, at the price of NT$20.0 per share to investors. As of March 31, 2014, we owned approximately 523 million ChipMOS Taiwan shares, representing 62.1% of ChipMOS Taiwan s outstanding shares. On April 9, 2014, ChipMOS Bermuda sold approximately 1.3 million ChipMOS Taiwan shares as green shoe option to market investors. As of the date of this Annual Report on Form 20-F, we continue to own approximately 522 million or 60.4% of ChipMOS Taiwan shares. See Item 3. Key Information Risk Factors Risk Relating to Our Corporate Structure ChipMOS Taiwan s ability to maintain its listing and trading status on the Taiwan Stock Exchange is dependent on factors outside of the Company or ChipMOS Taiwan s control and satisfaction of stock exchange requirements. ChipMOS Taiwan may not be able to overcome such factors that disrupt its trading status on the main board of Taiwan Stock Exchange or satisfy other eligibility requirements that may be required of it in the future for additional information on ChipMOS Taiwan s listing plan. In Taiwan, we conduct testing operations in our facilities at the Hsinchu Science Park and the Hsinchu Industrial Park, gold bumping and wafer testing in our facility at Chupei, and testing and assembly operations in our facility at the Southern Taiwan Science Park. We also conduct operations in Mainland China through ChipMOS Shanghai, a wholly-owned subsidiary of Modern Mind. ChipMOS Shanghai operates a testing and assembly facility at the Qingpu Industrial Zone in Shanghai. Through our subsidiaries, we also have equity interests in other companies that are engaged in the semiconductor industry. In April 2011, ChipMOS Bermuda entered into the MMT Assignment Agreement with ThaiLin to sell the MMT Notes to ThaiLin for a purchase price of approximately US$40 million. The MMT Assignment Agreement transaction was completed on October 3, 2011 and Modern Mind then became the wholly-owned subsidiary of ThaiLin. See Item 4. Information on the Company Our Structure and History for more details.

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 testing and assembly 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 testing and assembly equipment. In particular, increases or decreases in our capacity utilization rates could significantly affect our gross margins since the unit cost of testing and assembly 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 testing and assembly services, resulting in an increase in depreciation expenses relative to revenue. In particular, the capacity utilization rates for our testing 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.

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Highly Cyclical Nature of the Semiconductor Industry. The worldwide semiconductor industry has experienced peaks and troughs over the last decade, with a severe downturn beginning in the fourth quarter of 2000 that was followed by a recovery in early 2003. The significant decrease in market demand for semiconductors that began in 2000 adversely affected our results of operations for 2001 and 2002. Beginning in the fourth quarter of 2008, the semiconductor industry commenced another significant downturn which continued in 2009 and in 2010. Market demand for semiconductors significantly decreased across our industry during these periods, which adversely affected average selling prices for our services and our results of operations for 2008, 2009 and 2010. The impact on our results of operations of the decrease in market demand during these periods was partly offset by increases in our 2009 and 2010 revenue from assembly services for logic/mixed-signal semiconductors due to higher customer demand for these services in 2009 and 2010. The overall outsourced assembly and testing services for memory and logic/mixed-signal semiconductors increased gradually each year since 2010, continuing in 2013. During periods of decreased demand for assembled semiconductors, some of our customers may forego, delay or simplify final testing of certain types of semiconductors, such as DRAM, which may further decrease demand and average selling prices for our services and intensify our difficulties related to realizing pricing levels, capacity utilization rates and gross margin during these periods.

Declining Average Selling Prices of Our Testing and Assembly 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 testing and assembly services experienced sharp declines during such periods as a result of intense price competition from other independent testing and assembly 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. Despite an increase in the demand for mobile/niche DRAM in 2010, for DRAMs with more advanced features such as that of enhanced graphic capability, increased power efficiency and increased mobility, the average market demand for DRAM remained low since 2010 until 2013. Our revenue is largely attributable to fees from testing and assembling semiconductors for use in personal computers, consumer and portable electronic products, display applications and communications equipment. The markets for these products are intensely competitive, and a significant decrease in demand puts pricing pressure on our testing and assembly services and negatively affects our earnings. The oversupply of DRAM products in the second half of 2007 and the weak demand in the DRAM market in 2008 and in the first quarter of 2009 resulted in significant reductions in the price of DRAM products, which in turn drove down the average selling prices for our testing and assembly services for DRAM products from the second half of 2009 and continue in 2013.

Change in Product Mix. Declines in average selling prices since 2009 have been partially offset by a change in our revenue mix. In particular, revenue from testing and assembly of LCD and other flat-panel display driver semiconductors, bumping services and 12-inch wafer processing have increased as a percentage of our total revenue over the 2009 to 2013 period. 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 on our ability to attain profitability.

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Recent Acquisitions

In March 2007, we completed a share purchase and subscription transaction with ChipMOS Taiwan and Siliconware Precision, under which we became a holder of 99.1% of the outstanding common shares of ChipMOS Taiwan. In April 2007, we and ChipMOS Taiwan further entered into a share exchange transaction and pursuant to which we agreed to exchange one common share for every 8.4 ChipMOS Taiwan shares outstanding. Following the completion of the share exchange transaction in September 2007, ChipMOS Taiwan became our wholly-owned subsidiary. In February 2010, we agreed to sell 15.8% of ChipMOS Taiwan s outstanding shares to Siliconware Precision. The share purchase transaction was completed in January 2011. As part of ChipMOS Taiwan s listing plan on the TWSE, on April 16, 2013, we completed the sale of 6.5 million outstanding ChipMOS Taiwan shares or 0.8% of the total number of ChipMOS Taiwan s outstanding shares, at the price of NT$15.0 per share to ChipMOS Taiwan s underwriters for the TWSE listing plan and to certain others, including non-US employees of ChipMOS Taiwan. Also, from September 2, 2013 to October 3, 2013, we completed another sale of 180 million outstanding ChipMOS Taiwan shares or 21.4% of the total number of ChipMOS Taiwan s outstanding shares, at the price of NT$20.00 per share to investors. As of March 31, 2014, we owned 62.1% of ChipMOS Taiwan s outstanding shares. See Item 4. Information on the Company Our Structure and History for description of our earlier merger events.

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 flat-panel display driver semiconductor testing and assembly services; and (4) bumping services for memory, logic/mixed-signal and LCD and other flat-panel display driver semiconductors. The following table sets forth, for the periods indicated, our consolidated revenue for each segment.

	Year ended December 31,		
	2012 NT$	2013 NT$	2013 US$
	(in millions)		
Testing			
Memory	$ 5,055.1	$ 3,979.6	$ 133.4
Logic/mixed-signal	508.1	616.5	20.7
Total testing	5,563.2	4,596.1	154.1
Assembly			
Memory	5,523.8	5,635.0	188.9
Logic/mixed-signal	856.8	638.7	21.4
Total assembly	6,380.6	6,273.7	210.3
LCD and other flat-panel display driver semiconductor testing and assembly	4,356.3	4,781.2	160.3
Bumping	2,920.4	3,710.9	124.4
Total	$ 19,220.5	$ 19,361.9	$ 649.1

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 testing and assembly services for memory semiconductors, logic/mixed-signal semiconductors, testing and assembly services for LCD and other flat-panel display 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 outside Taiwan and Mainland China in connection with possible future long-term capacity agreements.

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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 up front 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.

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 testing and assembly services for LCD and other flat-panel display driver semiconductors and bump