

ADVANCED SEMICONDUCTOR ENGINEERING INC  
Form 20-F  
March 28, 2018

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

**FORM 20-F**

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

OR

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF  
1934**  
**For the fiscal year ended December 31, 2017**

OR

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

OR

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

**Commission file number: 001-16125**

(Exact name of Registrant as specified in its charter)

**Advanced Semiconductor Engineering, Inc.**

(Translation of Registrant's Name into English)

**REPUBLIC OF CHINA**

(Jurisdiction of Incorporation or Organization)

**26 Chin Third Road**

**Nantze Export Processing Zone**

Nantze, Kaohsiung, Taiwan

**Republic of China**

(Address of Principal Executive Offices)

**Joseph Tung**

**Room 1901, No. 333, Section 1 Keelung Rd.**

**Taipei, Taiwan, 110**

**Republic of China**

**Tel: 886-2-6636-5678**

**Fax: 882-2-2757-6121**

**Email: [ir@aseglobal.com](mailto:ir@aseglobal.com)**

(Name, Telephone, Email and/or Facsimile number and Address of Company Contact Person)

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

<u>Title of Each Class</u>	<u>Name of Each Exchange on which Registered</u>
Common Shares, par value NT\$10.00 each	The New York Stock Exchange*

\*Traded in the form of American Depositary Receipts evidencing American Depositary Shares (the “ADSs”), each representing five common shares of Advanced Semiconductor Engineering, Inc.

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

**None**

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

**None**

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:

8,737,306,664 Common Shares, par value NT\$10 each\*\*

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes No

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the registrant has submitted electronically 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, a non-accelerated filer, or an emerging growth company. See definition of “large accelerated filer,” “accelerated filer,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer      Accelerated filer      Non-accelerated filer      Emerging growth company

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

† The term “new or revised financial accounting standard” refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

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

U.S. GAAP      International Financial Reporting Standards as issued by the International Accounting Standards Board      Other

If “Other” has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow:

Item 17    Item 18

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

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court.

Yes No

\*\* As a result of the exercise of employee stock options subsequent to December 31, 2017, as of January 31, 2018, we had 8,739,734,964 shares outstanding.

**table of contents**

---

Page

USE OF CERTAIN TERMS 1

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS 2

PART I 6

Item 1. Identity of Directors, Senior Management and Advisers 6

Item 2. Offer Statistics and Expected Timetable 6

Item 3. Key Information 6

SELECTED FINANCIAL DATA 6

CAPITALIZATION AND INDEBTEDNESS 9

REASON FOR THE OFFER AND USE OF PROCEEDS 9

RISK FACTORS 9

Item 4. Information on the Company 32

HISTORY AND DEVELOPMENT OF THE COMPANY 32

BUSINESS OVERVIEW 34

ORGANIZATIONAL STRUCTURE 58

PROPERTY, PLANTS AND EQUIPMENT 60

Item 4A. Unresolved Staff Comments 64

Item 5. Operating and Financial Review and Prospects 64

OPERATING RESULTS AND TREND INFORMATION 64

LIQUIDITY AND CAPITAL RESOURCES 75

RESEARCH AND DEVELOPMENT 79

TREND INFORMATION 80

OFF-BALANCE SHEET ARRANGEMENTS 80

TABULAR DISCLOSURE OF CONTRACTUAL OBLIGATIONS 81

SAFE HARBOR 81

Item 6. Directors, Senior Management and Employees 81

DIRECTORS AND SENIOR MANAGEMENT 81

COMPENSATION 87

BOARD PRACTICES 88

EMPLOYEES 88

SHARE OWNERSHIP 89

Item 7. Major Shareholders and Related Party Transactions 90

MAJOR SHAREHOLDERS 91

RELATED PARTY TRANSACTIONS 91

INTERESTS OF EXPERTS AND COUNSEL 92

Item 8. Financial Information 92

<u>CONSOLIDATED STATEMENTS AND OTHER</u>	<u>92</u>
<u>FINANCIAL INFORMATION</u>	<u>92</u>
<u>SIGNIFICANT CHANGES</u>	<u>95</u>
<u>Item 9. The Offer and Listing</u>	<u>95</u>
<u>OFFER AND LISTING DETAILS</u>	<u>95</u>
<u>PLAN OF DISTRIBUTION</u>	<u>96</u>
<u>MARKETS</u>	<u>96</u>
<u>SELLING SHAREHOLDERS</u>	<u>97</u>
<u>DILUTION</u>	<u>97</u>
<u>EXPENSES OF THE ISSUE</u>	<u>97</u>
<u>Item 10. Additional Information</u>	<u>97</u>
<u>SHARE CAPITAL</u>	<u>97</u>
<u>ARTICLES OF INCORPORATION</u>	<u>97</u>
<u>MATERIAL CONTRACT</u>	<u>103</u>
<u>FOREIGN INVESTMENT IN THE ROC</u>	<u>104</u>
<u>EXCHANGE CONTROLS</u>	<u>105</u>



<u>TAXATION</u>	<u>106</u>
<u>DIVIDENDS AND PAYING AGENTS</u>	<u>110</u>
<u>STATEMENT BY EXPERTS</u>	<u>110</u>
<u>DOCUMENTS ON DISPLAY</u>	<u>110</u>
<u>SUBSIDIARY INFORMATION</u>	<u>110</u>
<u>Item 11. Quantitative and Qualitative Disclosures about Market Risk</u>	<u>111</u>
<u>Item 12. Description of Securities Other Than Equity Securities</u>	<u>114</u>
<u>DEBT SECURITIES</u>	<u>114</u>
<u>WARRANTS AND RIGHTS</u>	<u>114</u>
<u>OTHER SECURITIES</u>	<u>114</u>
<u>AMERICAN DEPOSITARY SHARES</u>	<u>114</u>
<u>PART II</u>	<u>116</u>
<u>Item 13. Defaults, Dividend Arrearages and Delinquencies</u>	<u>116</u>
<u>Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds</u>	<u>116</u>
<u>Item 15. Controls and Procedures</u>	<u>116</u>
<u>Item 16. [Reserved]</u>	<u>118</u>
<u>Item 16A. Audit Committee Financial Expert</u>	<u>118</u>
<u>Item 16B. Code of Ethics</u>	<u>118</u>
<u>Item 16C. Principal Accountant Fees and Services</u>	<u>118</u>
<u>Item 16D. Exemptions from the Listing Standards for Audit Committees</u>	<u>119</u>
<u>Item 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers</u>	<u>119</u>
<u>Item 16F. Change In Registrant’s Certifying Accountant</u>	<u>120</u>
<u>Item 16G. Corporate Governance</u>	<u>120</u>
<u>Item 16H. Mine Safety Disclosure</u>	<u>123</u>
<u>PART III</u>	<u>124</u>
<u>Item 17. Financial Statements</u>	<u>124</u>
<u>Item 18. Financial Statements</u>	<u>124</u>
<u>Item 19. Exhibits</u>	<u>124</u>

Table of Contents

USE OF CERTAIN TERMS

Unless the context otherwise requires, references in this annual report to:

“2013 Capital Increase” are to issuance of 130,000,000 common shares for public subscription, which was effected by way of an increase in the authorized share capital in the amount of NT\$1,300.0 million of the Company in September 2013;

“2014 Bonds” are to RMB150.0 million 3.125% Guaranteed Bonds due September 22, 2014, issued by Anstock Limited, our wholly owned subsidiary incorporated in the Cayman Islands;

“2016 Bonds” are to RMB500.0 million 4.250% Guaranteed Bonds due September 20, 2016, issued by Anstock Limited;

“2018 Convertible Bonds” are to US\$400.0 million Zero Coupon Convertible Bonds due September 5, 2018, issued by the Company;

“2018 NTD-linked Convertible Bonds” are to US\$200.0 million NTD-linked Zero Coupon Convertible Bonds due March 27, 2018, issued by the Company;

“ASE,” the “Company,” “ASE Group,” “ASE Inc.,” “we,” “us,” or “our” are to Advanced Semiconductor Engineering, Inc. and its subsidiaries, unless the context requires otherwise, its subsidiaries;

“ASEEE” are to ASE Embedded Electronics Inc., a company incorporated under the laws of the ROC;

“ASE Chung Li” are to ASE (Chung Li) Inc., a company previously incorporated under the laws of the ROC that merged into ASE Inc. on August 1, 2004;

“ASE Electronics” are to ASE Electronics Inc., a company incorporated under the laws of the ROC;

“ASE Holding” are to ASE Industrial Holding Co., Ltd.;

“ASE Japan” are to ASE Japan Co. Ltd., a company incorporated under the laws of Japan;

- “ASE Korea” are to ASE (Korea) Inc., a company incorporated under the laws of the Republic of Korea;
  
- “ASE Material” are to ASE Material Inc., a company previously incorporated under the laws of the ROC that merged into ASE Inc. on August 1, 2004;
  
- “ASE Shanghai” are to ASE (Shanghai) Inc., a company incorporated under the laws of the PRC;
  
- “ASE Test” are to ASE Test Limited, a company incorporated under the laws of Singapore;
  
- “ASE Test Malaysia” are to ASE Electronics (M) Sdn. Bhd., a company incorporated under the laws of Malaysia;
  
- “ASE Test Taiwan” are to ASE Test, Inc., a company incorporated under the laws of the ROC;
  
- “ASEKS” are to ASE (KunShan) Inc., a company incorporated under the laws of the PRC;
  
- “ASEN” are to Suzhou ASEN Semiconductors Co., Ltd., a company incorporated under the laws of the PRC;
  
- “ASESH AT” are to ASE Assembly & Test (Shanghai) Limited, formerly known as Global Advanced Packaging Technology Limited, or GAPTECH, a company incorporated under the laws of the PRC;

Table of Contents

“ASEWH” are to ASE (Weihai), Inc., a company incorporated under the laws of the PRC;

“Corporate Bonds” are to NT\$8.0 billion 1.450% secured corporate bonds with five year term issued in August 2011 by the Company;

“Deposit Agreement” are to deposit agreement dated September 29, 2000 among Citibank, N.A., as depository, holders and beneficial owners of ADSs and us, which was filed as an exhibit to our registration statement on post-effective amendment No. 2 to Form F-6 on September 16, 2003, and its two amendments, which were filed as an exhibit to our registration statement on post-effective amendment No. 1 to Form F-6 on April 3, 2006 and our registration statement on post-effective amendment No. 2 to Form F-6 on October 25, 2006;

“EEMS Test Singapore” are to EEMS Test Singapore Pte. Ltd., a company incorporated under the laws of Singapore, which changed its name to ASE Singapore II Pte. Ltd. and was subsequently merged into ASE Singapore Pte. Ltd. on January 1, 2011;

“Exchange Act” are to the U.S. Securities Exchange Act of 1934, as amended;

“FSC” are to the Financial Supervisory Commission of the Republic of China;

“Green Bonds” are to US\$300.0 million 2.125% Guaranteed Bonds due July 24, 2017, offered by Anstock II Limited, our wholly owned subsidiary incorporated in the Cayman Islands;

“Hung Ching” are to Hung Ching Development & Construction Co. Ltd., a company incorporated under the laws of the ROC;

“IFRS” are to International Financial Reporting Standards, International Accounting Standards and Interpretations as issued by the International Accounting Standards Board;

“ISE Labs” are to ISE Labs, Inc., a corporation incorporated under the laws of the State of California;

“Initial SPIL Tender Offer” are to ASE’s offer to purchase 779,000,000 common shares (including common shares represented by outstanding American depository shares) of SPIL through concurrent tender offers in the ROC and the U.S., at a price of NT\$45 per SPIL common share and NT\$225 per SPIL American depository share, commenced on August 24, 2015 and expired on September 22, 2015;

“Joint Share Exchange Agreement” are to the joint share exchange agreement entered into between ASE and SPIL on June 30, 2016;

“Korea” or “South Korea” are to the Republic of Korea;

“Mainland Investors Regulations” are to the Regulations Governing Securities Investment and Futures Trading in Taiwan by Mainland Area Investors;

“MOEAIC” are to Investment Commission, the ROC Ministry of Economic Affairs;

“NYSE” are to New York Stock Exchange;

“PowerASE” are to PowerASE Technology, Inc., a company incorporated under the laws of the ROC, which was merged into ASE Inc. in May 2012;

“PRC” are to the People’s Republic of China and excludes Taiwan, Macau and Hong Kong;

“PRC Regulations” are to the Regulations Governing Mainland China Investors’ Securities Investments and Futures Trading in Taiwan;

“QDII” are to qualified domestic institutional investors;

Table of Contents

“Republic of China”, the “ROC” and “Taiwan” are to the Republic of China, including Taiwan and certain other possessions;

· “ROC Trading Day” are to a day when TWSE is open for business;

· “SEC” are to the Securities and Exchange Commission of the U.S.;

· “Second SPIL Tender Offer” are to ASE’s offer to purchase 770,000,000 common shares (including common shares represented by outstanding American depository shares) of SPIL through concurrent tender offers in the ROC and the U.S., at a price of NT\$55 per SPIL common share and NT\$275 per SPIL American depository share, commenced on December 29, 2015 and expired on March 17, 2016 due to failure to obtain regulatory approval from the Taiwan Fair Trade Commission prior to the expiration of the Second SPIL Tender Offer;

· “Securities Act” are to the U.S. Securities Act of 1933, as amended;

· “SiP” are to system-in-package;

· “SPIL” are to Siliconware Precision Industries Co., Ltd., and, unless the context requires otherwise, its subsidiaries;

· “SPIL Acquisition” are to ASE’s effort to effect an acquisition of 100% of the common shares and American depository shares of SPIL pursuant to the Joint Share Exchange Agreement;

· “Taiwan-IFRS” are to the Regulations Governing the Preparation of Financial Reports by Securities Issuers, the IFRS as well as related guidance translated by Accounting Research and Development Foundation and endorsed by the FSC;

· “Tessera” are to Tessera, Inc., a company that filed a suit against the Company and its U.S. subsidiary, ASE (U.S.) Inc.;

· “TWSE” are to Taiwan Stock Exchange;

· “UGJQ” are to Universal Global Technology (Shanghai) Co., Ltd., a company incorporated under the laws of the PRC;

· “UGKS” are to Universal Global Technology (Kunshan) Co. Ltd., a company incorporated under the laws of the PRC;

· “UGTW” are to Universal Global Scientific Industrial Co. Ltd., a company incorporated under the laws of the ROC;

“Universal Scientific” or “USI” are to Universal Scientific Industrial Co., Ltd., a company incorporated under the laws of the ROC;

“Universal Scientific Shanghai” are to Universal Scientific Industrial (Shanghai) Co., Ltd., a company incorporated under the laws of the PRC;

“U.S.” refers to United States of America;

“U.S. GAAP” are to accounting principles generally accepted in the U.S.;

“USI Inc.” are to USI Inc., a company incorporated under the laws of the ROC;

“USI Mexico” are to Universal Scientific Industrial De Mexico S.A. DE C.V., a company incorporated under the laws of Mexico;

Table of Contents

·“USISZ” are to Universal Electronics (Shenzhen) Co. Ltd., a company incorporated under the laws of the PRC; and

·“Wuxi Tongzhi” are to Wuxi Tongzhi Microelectronics Co., Ltd., a company incorporated under the laws of the PRC.

We publish our financial statements in New Taiwan dollars, the lawful currency of the ROC. In this annual report, references to “United States dollars,” “U.S. dollars” and “US\$” are to the currency of the United States; references to “New Taiwan dollars,” “NT dollars” and “NT\$” are to the currency of the ROC; references to “RMB” are to the currency of the PRC; references to “JP¥” are to the currency of Japan; references to “MYR” are to the currency of Malaysia; references to “SGD” are to the currency of Republic of Singapore; references to “KRW” are to the currency of Republic of Korea; and references to “EUR” are to the currency of the European Union. Unless otherwise noted, all translations from NT dollars to U.S. dollars were made at the exchange rate as set forth in the H.10 weekly statistical release of the Federal Reserve System of the United States (the “Federal Reserve Board”) as of December 29, 2017, which was NT\$29.64=US\$1.00, and all translations from RMB to U.S. dollars were made at the exchange rate as set forth in the H.10 weekly statistical release of the Federal Reserve Board as of December 29, 2017, which was RMB6.5063=US\$1.00. All amounts translated into U.S. dollars in this annual report are provided solely for your convenience and no representation is made that the NT dollar, RMB or U.S. dollar amounts referred to herein could have been or could be converted into U.S. dollars or NT dollars/RMB, as the case may be, at any particular rate or at all. On March 16, 2018, the exchange rate between NT dollars and U.S. dollars as set forth in the H.10 weekly statistical release by the Federal Reserve Board was NT\$29.13=US\$1.00. On March 16, 2018, the exchange rate between RMB and U.S. dollars as set forth in the H.10 weekly statistical release by the Federal Reserve Board was RMB6.3300=US\$1.00.



Table of Contents

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This annual report on Form 20-F contains “forward-looking statements” within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. Although these forward-looking statements, which may include statements regarding our future results of operations, financial condition or business prospects, are based on our own information and information from other sources we believe to be reliable, you should not place undue reliance on these forward-looking statements, which apply only as of the date of this annual report. The words “anticipate,” “believe,” “estimate,” “expect,” “intend,” “plan” and similar expressions, as they relate to us, are intended to identify these forward-looking statements in this annual report. Our actual results of operations, financial condition or business prospects may differ materially from those expressed or implied in these forward-looking statements for a variety of reasons, including risks associated with cyclical and market conditions in the semiconductor or electronics industry; changes in our regulatory environment, including our ability to comply with new or stricter environmental regulations and to resolve environmental liabilities; demand for the outsourced semiconductor packaging, testing and electronic manufacturing services we offer and for such outsourced services generally; the highly competitive semiconductor or manufacturing industry we are involved in; our ability to introduce new technologies in order to remain competitive; international business activities; our business strategy; our future expansion plans and capital expenditures; the uncertainties as to whether we can complete the share exchange contemplated by the Joint Share Exchange Agreement between us and SPIL; the strained relationship between the ROC and the PRC; general economic and political conditions; the recent global economic crisis; possible disruptions in commercial activities caused by natural or human-induced disasters; fluctuations in foreign currency exchange rates; and other factors. For a discussion of these risks and other factors, see “Item 3. Key Information—Risk Factors.”

Table of Contents

PART I

Item 1. Identity of Directors, Senior Management and Advisers

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

SELECTED FINANCIAL DATA

The selected consolidated statements of comprehensive income data and cash flow data for the years ended December 31, 2015, 2016 and 2017, and the selected consolidated balance sheet data as of December 31, 2016 and 2017 set forth below are derived from our audited consolidated financial statements included in this annual report and should be read in conjunction with, and are qualified in their entirety by reference to, these consolidated financial statements, including the notes thereto. The selected consolidated statements of comprehensive income data and cash flow data for the year ended December 31, 2013 and 2014 and the selected consolidated balance sheet data as of December 31, 2013, 2014 and 2015 set forth below are derived from our audited consolidated financial statements not included herein.

Our consolidated financial statements have been prepared and presented in accordance with IFRS.

Following our adoption of IFRS for SEC filing purposes, pursuant to the rule amendments adopted by the SEC that became effective on March 4, 2008, we were no longer required to reconcile our consolidated financial statements with U.S. GAAP.



Table of Contents

IFRS	As of and for the Year Ended December 31,					
	2013	2014	2015	2016 (Retrospectively Adjusted)	2017	
	NT\$	NT\$	NT\$	NT\$	NT\$	US\$
	(in millions, except earnings per share and per ADS data)					
<b>Statement of Comprehensive Income Data:</b>						
Operating revenues	219,862.4	256,591.4	283,302.5	274,884.1	290,441.2	9,799.0
Operating costs	(177,040.4)	(203,002.9)	(233,167.3)	(221,696.9)	(237,708.9)	(8,019.9)
Gross profit	42,822.0	53,588.5	50,135.2	53,187.2	52,732.3	1,779.1
Operating expenses <sup>(1)</sup>	(20,760.4)	(23,942.7)	(25,250.6)	(26,526.8)	(27,513.7)	(928.3)
Other operating income and expenses, net	(1,348.2)	228.7	(251.5)	(800.3)	108.6	3.7
Profit from operations	20,713.4	29,874.5	24,633.1	25,860.1	25,327.2	854.5
Non-operating income (expense), net <sup>(1)</sup>	(1,343.6)	(1,339.4)	378.7	2,108.6	5,693.5	192.1
Profit before income tax	19,369.8	28,535.1	25,011.8	27,968.7	31,020.7	1,046.6
Income tax expense	(3,499.6)	(5,666.0)	(4,311.1)	(5,390.8)	(6,523.6)	(220.1)
Profit for the year	15,870.2	22,869.1	20,700.7	22,577.9	24,497.1	826.5
Attributable to						
Owners of the Company	15,404.5	22,228.6	19,732.1	21,324.4	22,819.1	769.9
Non-controlling interests	465.7	640.5	968.6	1,253.5	1,678.0	56.6
	15,870.2	22,869.1	20,700.7	22,577.9	24,497.1	826.5
Other comprehensive income (loss), net of income tax	3,233.3	5,504.4	(147.5)	(7,959.3)	(4,637.9)	(156.5)
Total comprehensive income for the year	19,103.5	28,373.5	20,553.2	14,618.6	19,859.2	670.0
Attributable to						
Owners of the Company	18,509.6	27,394.3	19,659.1	13,957.0	18,524.1	625.0
Non-controlling interests	593.9	979.2	894.1	661.6	1,335.1	45.0
	19,103.5	28,373.5	20,553.2	14,618.6	19,859.2	670.0
Earnings per common share <sup>(1) (2)</sup> :						
Basic	2.05	2.89	2.58	2.78	2.80	0.09
Diluted	1.99	2.79	2.48	2.33	2.60	0.09
Dividends per common share <sup>(3)</sup>	1.05	1.29	2.00	1.60	1.40	0.05
Earnings per equivalent ADS <sup>(1) (2)</sup> :						
Basic	10.26	14.46	12.89	13.91	13.98	0.47
Diluted	9.96	13.93	12.38	11.64	12.98	0.44
Number of common shares <sup>(4)</sup> :						
Basic	7,508.5	7,687.9	7,652.8	7,662.9	8,160.9	275.3
Diluted	7,747.6	8,220.7	8,250.1	8,284.1	8,369.2	282.4
Number of equivalent ADSs						
Basic	1,501.7	1,537.6	1,530.6	1,532.6	1,632.2	55.1
Diluted	1,549.5	1,644.1	1,650.0	1,656.8	1,673.8	56.5
<b>Balance Sheet Data:</b>						
Current assets	132,176.5	159,955.2	156,732.8	142,789.7	144,938.3	4,890.0
Investments - non-current <sup>(1)(5)</sup>	2,345.5	2,409.3	38,046.6	50,853.0	49,876.8	1,682.8

Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

Property, plant and equipment, net	131,497.3	151,587.1	149,997.1	143,880.2	135,168.4	4,560.3
Intangible assets <sup>(1)</sup>	11,953.6	11,913.3	11,888.6	12,107.6	11,341.4	382.6
Long-term prepayment for lease	4,072.3	2,586.0	2,556.2	2,237.0	8,851.3	298.6
Others <sup>(6)</sup>	4,676.9	5,267.9	5,765.6	6,063.1	13,746.1	463.8
Total assets <sup>(1)</sup>	286,722.1	333,718.8	364,986.9	357,930.6	363,922.3	12,278.1

7

Table of Contents

IFRS	As of and for the Year Ended December 31,					
	2013	2014	2015	2016 (Retrospectively Adjusted)	2017	US\$
	NT\$	NT\$	NT\$	NT\$	NT\$	US\$
	(in millions, except earnings per share and per ADS data)					
Short-term debts <sup>(7)</sup>	44,618.2	41,176.0	36,983.4	20,955.5	17,962.5	606.0
Current portion of long-term debts	6,016.5	2,835.5	16,843.3	16,341.1	14,441.3	487.2
Long-term debts <sup>(8)</sup>	50,166.5	55,375.8	66,535.1	74,354.9	44,501.5	1,501.4
Other liabilities <sup>(9)</sup>	60,176.9	78,640.1	78,700.1	100,393.4	103,669.3	3,497.6
Total liabilities	160,978.1	178,027.4	199,061.9	191,089.4	162,612.1	5,486.2
Share capital	78,180.3	78,715.2	79,185.7	79,568.0	87,380.8	2,948.1
Non-controlling interests	4,128.4	8,209.9	11,492.5	12,000.6	13,190.1	445.0
Equity attributable to owners of the Company <sup>(1)</sup>	121,615.6	147,481.5	154,432.4	154,840.6	188,120.1	6,346.9
<b>Cash Flow Data:</b>						
Capital expenditures	(29,142.7)	(39,599.0)	(30,280.1)	(26,714.2)	(24,699.2)	(833.3)
Depreciation and amortization	25,470.9	26,350.8	29,518.7	29,470.4	29,205.2	985.3
Net cash inflow from operating activities	41,296.0	45,863.5	57,548.3	52,107.9	47,430.8	1,600.2
Net cash outflow from investing activities	(29,925.8)	(38,817.9)	(63,351.4)	(43,159.5)	(16,086.2)	(542.7)
Net cash inflow (outflow) from financing activities	12,794.9	(2,797.0)	8,636.3	(21,087.0)	(19,323.4)	(651.9)
<b>Segment Data:</b>						
Operating revenues:						
Packaging	112,603.9	121,336.5	116,607.3	125,282.8	126,225.1	4,258.6
Testing	24,732.2	25,874.7	25,191.9	27,031.8	26,157.3	882.5
Electronic manufacturing services	78,530.6	105,784.4	138,242.1	115,395.1	133,948.0	4,519.2
Others	3,995.7	3,595.8	3,261.2	7,174.4	4,110.8	138.7
Gross profit:						
Packaging	23,673.7	33,040.2	30,348.5	28,524.6	28,785.3	971.1
Testing	9,079.4	9,632.0	9,025.7	9,980.6	9,303.6	313.9
Electronic manufacturing services	8,054.3	9,118.9	9,433.4	11,234.8	13,562.5	457.6
Others <sup>(1)</sup>	2,014.6	1,797.4	1,327.6	3,447.3	1,080.9	36.5

We have completed the identification of difference between the cost of the investment and our share of the net fair value of a subsidiary and its associates' identifiable assets and liabilities in 2017. Therefore, we retrospectively adjusted the comparative financial statement for the year ended December 31, 2016, which differs from the results included in our annual report on Form 20-F for the year ended December 31, 2016. The retrospective adjustments resulted in a decrease of NT\$8.3 million (US\$0.3 million) to the investments accounted for using the equity (1) method, a decrease of NT\$68.6 million (US\$2.3 million) to the goodwill and an increase of NT\$56.3 million (US\$1.9 million) to the other intangible assets on the consolidated balance sheet as of December 31, 2016, as well as a decrease of NT\$8.3 million (US\$0.3 million) to share of the profit of associates, an increase of NT\$7.0 million (US\$0.2 million) to operating cost and an increase of NT\$41.1 million (US\$1.4 million) to operating expense on the consolidated statement of comprehensive income for the year ended December 31, 2016. See notes 13 and 28 to our audited consolidated financial statement included in this annual report for more information.

The denominators for diluted earnings per common share and diluted earnings per equivalent ADS are calculated (2) to account for the potential diluted factors, such as the exercise of options and conversion of our convertible bonds into our common shares.

(3) Dividends per common share issued as a cash dividend, a stock dividend and distribution from capital surplus.

Represents the weighted average number of shares after retroactive adjustments to give effect to stock dividends. (4) Common shares held by consolidated subsidiaries are classified as “treasury stock,” and are deducted from the number of common shares outstanding.

(5) Including available-for-sale financial assets — non-current and investments accounted for using the equity method.

(6) Including investment properties, deferred tax assets, other financial assets — non-current and other non-current assets.

(7) Including short-term bank loans and short-term bills payable.

(8) Including bonds payable, long-term borrowings (consisted of bank loans and bills payable) and capital lease obligations.

(9) Including (x) current liabilities other than short-term debts and current portion of long-term debts and (y) non-current liabilities other than long-term debts.

Table of Contents**Exchange Rates**

Fluctuations in the exchange rate between NT dollars and U.S. dollars will affect the U.S. dollar equivalent of the NT dollar price of our common shares on the TWSE and, as a result, will likely affect the market price of the ADSs. Fluctuations will also affect the U.S. dollar conversion by the depositary under our ADS deposit agreement referred to below of cash dividends paid in NT dollars on, and the NT dollar proceeds received by the depositary from any sale of, common shares represented by ADSs, in each case, according to the terms of the deposit agreement dated September 29, 2000 and as amended and supplemented from time to time among us, Citibank N.A., as depositary, and the holders and beneficial owners from time to time of the ADSs, which we refer to as the deposit agreement.

The following table sets forth, for the periods indicated, information concerning the number of NT dollars for which one U.S. dollar could be exchanged. The exchange rates reflect the exchange rates set forth in the H.10 statistical release of the Federal Reserve Board.

	<b>Exchange Rate</b>			
	<b>Average<sup>(1)</sup></b>	<b>High</b>	<b>Low</b>	<b>Period End</b>
2013	29.73	30.20	28.93	29.83
2014	30.38	31.80	29.85	31.60
2015	31.80	33.17	30.37	32.79
2016	32.23	33.74	31.05	32.40
2017	30.40	32.37	29.64	29.64
September	30.13	30.37	29.93	30.33
October	30.25	30.44	30.12	30.12
November	30.08	30.21	29.97	29.98
December	29.95	30.05	29.64	29.64
2018				
January	29.39	29.61	29.05	29.16
February	29.25	29.42	29.03	29.32
March (through March 16, 2018)	29.25	29.35	29.13	29.13

Note:

Annual averages were calculated by using the average of the exchange rates on the last day of each month during (1) the relevant year. Monthly averages were calculated by using the average of the daily rates during the relevant month.

On March 16, 2018, the exchange rate as set forth in the H.10 weekly statistical release by the Federal Reserve Board was NT\$29.13=US\$1.00.



## CAPITALIZATION AND INDEBTEDNESS

Not applicable.

## REASON FOR THE OFFER AND USE OF PROCEEDS

Not applicable.

## RISK FACTORS

### **Risks Relating to Our Business**

Since we are dependent on the highly cyclical semiconductor and electronics industries and conditions in the markets for the end-use applications of our products, our revenues and net income may fluctuate significantly.

Our business is affected by market conditions in the highly cyclical semiconductor and electronics industries. Most of our customers operate in this industry, and variations in order levels from our customers and service fee rates may result in volatility in our revenues and net income. From time to time, the semiconductor and electronics industries have experienced significant, and sometimes prolonged, downturns. As our business is, and will continue to be, dependent on the requirements for independent packaging, testing and electronic manufacturing services, any future downturn in the industry would reduce demand for our services. For example, in the fourth quarter of 2008, the global economic crisis resulted in a significant deterioration in demand for our customers' products, which in turn affected demand for our services and adversely affected our operating results. Although demand has recovered, we expect there to be continued downward pressure on our average selling prices and continued volatility with respect to our sales volumes in the future. If we cannot reduce our costs or adjust our product mix to sufficiently offset any decline in sales volumes, our profitability will suffer, and we may incur losses.

Table of Contents

Market conditions in the semiconductor and electronics industries depend to a large degree on conditions in the markets for the end-use applications of various products, such as communications, computing and consumer electronics products. Any deterioration of conditions in the markets for the end-use applications would reduce demand for our services, and would likely have a material adverse effect on our financial condition and results of operations. In 2017, approximately 48.9%, 11.5% and 39.6% of our operating revenues from packaging and testing were attributed to the packaging and testing of semiconductors used in communications, computing and consumer electronics/industrial/automotive/other applications, respectively. In the same year, approximately 45.5%, 15.0%, 25.9%, 7.3% and 5.6% of our operating revenues from electronic manufacturing services were attributed to the communications, computing and storage, consumer electronics applications, industrial and automotive applications, respectively. Across end-use applications, our customers face intense competition and significant shifts in demand, which could put pricing pressure on our services and may adversely affect our revenues and net income.

A reversal or slowdown in the outsourcing trend for semiconductor packaging and testing services and electronic manufacturing services could adversely affect our growth prospects and profitability.

Semiconductor manufacturers that have their own in-house packaging and testing capabilities, known as integrated device manufacturers and original equipment manufacturers, have increasingly outsourced stages of the production process, including packaging, testing, electronic manufacturing and assembly, to independent companies in order to reduce costs, eliminate product complexity and meet fast-to-market requirements. In addition, the availability of advanced independent semiconductor manufacturing services has also enabled the growth of so-called “fables” semiconductor companies that focus exclusively on design and marketing and outsource their manufacturing, packaging and testing requirements to independent companies. We cannot assure you that these manufacturers and companies will continue to outsource their packaging, testing and manufacturing requirements to third parties like us. Furthermore, during an economic downturn, these integrated device manufacturers typically rely more on their own in-house packaging and testing capabilities, therefore decreasing their need to outsource. A reversal of, or a slowdown in, this outsourcing trend could result in reduced demand for our services and adversely affect our growth prospects and profitability.

Any global economic downturn could adversely affect the demand for our products and services, and a protracted global economic crisis would have a material adverse effect on us.

The global financial markets experienced significant disruptions in 2008 and the United States, Europe and other economies went into recession. The recovery from the lows of 2008 and 2009 was uneven and it is facing new challenges, including a European sovereign debt crisis that began in 2011, a referendum in the United Kingdom in June 2016, in which the majority of voters voted in favor of an exit from the European Union (“Brexit”), and continuing high unemployment rates in much of the world. It is unclear what the long-term impact of the European sovereign debt crisis will be and uncertainty remains over the long-term effects of the expansionary monetary and fiscal policies that have been adopted by the central banks and financial authorities of some of the world’s leading economies. There are also increased uncertainty in the wake of Brexit, which has resulted in downgrade of the credit ratings of the

United Kingdom and an increase in volatility in the global financial markets. Any economic downturn or crisis may cause our customers to do the following:

10

Table of Contents

- cancel or reduce planned expenditures for our products and services;
- seek to lower their costs by renegotiating their contracts with us;
- consolidate the number of suppliers they use, which may result in our loss of customers; and
- switch to lower-priced products or services provided by our competitors.

Any uncertainty or significant volatility in global economic conditions may also make it difficult for our customers to accurately forecast and plan future business activities and may have a material adverse effect on us.

If we are unable to compete favorably in the highly competitive markets of semiconductor packaging and testing and electronic manufacturing services, our revenues and net income may decrease.

The markets of semiconductor packaging and testing and electronic manufacturing services are very competitive. We face competition from a number of sources, including other independent semiconductor packaging and testing companies, integrated device manufacturers, and other electronic manufacturing services providers with large-scale manufacturing capabilities who can quickly react to market changes. We believe that the principal competitive factors in our industry are:

- technological expertise;
- the ability to provide total solutions to our customers, including integrated design, manufacturing, packaging and testing and electronic manufacturing services;
- ability to offer interconnect technologies at an optimal scale for our businesses;
- range of package types and testing platforms available;
- the ability to work closely with our customers at the product development stage;
- responsiveness and flexibility;

fast-to-market product development;

capacity;

diversity in facility locations;

production yield; and

price.

We face increasing competition, as most of our customers obtain services from more than one source. Rapid technological advances and aggressive pricing strategies by our competitors may continue to increase competition. Our ability to compete depends on factors both within and outside of our control and may be constrained by the distinct characteristics and production requirements of individual products. We cannot assure you that we will be able to continue to improve production efficiency and maintain reasonable profit for all of our products.

In addition, some of our competitors may have superior financial, marketing, manufacturing, research and development and technological resources than we do. For example, the central government of the PRC as well as provincial and municipal governments have provided various incentives to domestic companies in the semiconductor industry, including major semiconductor testing and packaging providers, such as Jiangsu Changjiang Electronics Technology Co., Ltd. Similarly, our customers may face competition from their competitors in the PRC, and such competitors may also receive significant subsidies from the PRC government. As we are downstream suppliers, the impact of such government policies on competition and price pressure of our customers may negatively impact our own business. Increasing competition may lead to declines in product prices and profitability and could have a material adverse effect on our business, financial condition, results of operations and future prospects.

Table of Contents

Our profitability depends on our ability to respond to rapid technological changes in the semiconductor industry.

The semiconductor industry is characterized by rapid increases in the diversity and complexity of semiconductors. As a result, we expect that we will need to constantly offer more sophisticated packaging and testing technologies and processes in order to respond to competitive industry conditions and customer requirements. We have successfully combined our packaging, testing and materials technologies with the expertise of electronic manufacturing services at the systems level to develop our SiP business. Success of a new product depends on a number of factors such as product acceptance by the market. New products are developed in anticipation of future demand. We cannot assure you that the launch of any new product will be successful, or that we will be able to produce sufficient quantities of these products to meet market demand. If we fail to develop, or obtain access to, advances in packaging or testing technologies or processes, we may become less competitive and less profitable. In addition, advances in technology typically lead to declining average selling prices for semiconductors packaged or tested with older technologies or processes. As a result, if we cannot reduce the costs associated with our services, the profitability of a given service and our overall profitability may decrease over time.

Our operating results are subject to significant fluctuations, which could adversely affect the market value of your investment.

Our operating results have varied significantly from period to period and may continue to vary in the future. Downward fluctuations in our operating results may result in decreases in the market price of our common shares and the ADSs. Among the more important factors affecting our quarterly and annual operating results are the following:

· changes in general economic and business conditions, particularly the cyclical nature of the semiconductor and electronics industries and the markets served by our customers;

· our ability to quickly adjust to unanticipated declines or shortfalls in demand and market prices;

· changes in prices for our products or services;

· volume of orders relative to our packaging, testing and manufacturing capacity;

· changes in costs and availability of raw materials, equipment and labor;

· our ability to obtain or develop substitute raw materials with lower cost;

- our ability to successfully develop or market new products or services;

our ability to successfully manage product mix in response to changes in market demand and differences in margin associated with different products;

- timing of capital expenditures in anticipation of future orders;

our ability to acquire or design and produce cost-competitive interconnect materials, and provide integrated solutions for electronic manufacturing services;

fluctuations in the exchange rate between the NT dollar or RMB and foreign currencies, especially the U.S. dollar; and

typhoons, earthquakes, drought, epidemics, tsunamis and other natural disasters, as well as industrial and other incidents such as fires and power outages.

Table of Contents

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

Due to our high percentage of fixed costs, we may be unable to maintain our gross margin at past levels if we are unable to achieve relatively high capacity utilization rates.

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 in connection with our acquisitions of equipment and facilities. Our profitability depends not only on the pricing levels for our services or products, but also on utilization rates for our machinery and equipment, commonly referred to as “capacity utilization rates.” In particular, increases or decreases in our capacity utilization rates can significantly affect gross margins since the unit cost generally decreases as fixed costs are allocated over a larger number of units. In periods of low demand, we experience relatively low capacity utilization rates in our operations, which leads to reduced margins. For example, in the fourth quarter of 2008, we experienced lower than anticipated utilization rates in our operations due to a significant decline in worldwide demand for our packaging and testing services, which resulted in reduced margins during that period. Although capacity utilization rates have recovered since 2009, we cannot assure you that we will be able to maintain or surpass our past gross margin levels if we cannot consistently achieve or maintain relatively high capacity utilization rates.

If we are unable to manage our expansion or investments effectively, our growth prospects may be limited and our future profitability and core business operations may be adversely affected.

We have significantly expanded our operations through both organic growth and acquisitions in recent years. For example, we acquired the controlling interest of Universal Scientific in 2010 to expand our product offering scope to electronic manufacturing services; we also entered into a joint venture agreement with TDK Corporation in May 2015 to further expand our business in embedded substrates; in June 2016, we entered into the Joint Share Exchange Agreement with SPIL to take advantage of the synergy effect of business combination between SPIL and us; furthermore, we entered into a joint venture agreement with Qualcomm Incorporated in February 2018 to expand our SiP business. We expect that we will continue to expand our operations in the future. The purpose of our expansion is mainly to provide total solutions to existing customers or to attract new customers and broaden our product range for a variety of end-use applications. However, rapid expansion may place a strain on our managerial, technical, financial, operational and other resources. As a result of our expansion, we have implemented and will continue to implement additional operational and financial controls and hire and train additional personnel. Any failure to manage our growth effectively could lead to inefficiencies and redundancies and result in reduced growth prospects and profitability.

In addition, we have recently made investments in real estate development businesses mostly in China. The PRC property market is volatile and may experience undersupply or oversupply and property price fluctuations. The central and local governments frequently adjust monetary and other fiscal policies to prevent and curtail the overheating of



the economy. Such policies may lead to changes in market conditions, including price instability and imbalance of supply and demand in respect of office, residential, retail, entertainment, cultural and intellectual properties. We may continue to make investments in this area in the future and our diversification in this industry may put pressure on our managerial, financial, operational and other resources. Our exposure to risks related to real estate development may also increase over time as a result of our expansion into such a business. There can be no assurance that our investments in such a business will yield the anticipated returns and that our expansion into such a business, including the resulting diversion of management's attention, will not adversely affect our core business operations.

We may not be successful in pursuing mergers and acquisitions. Any mergers or acquisitions we make may lead to a diversion of management resources.

Our future success may depend on acquiring businesses and technologies, making investments or forming joint ventures that complement, enhance or expand our current product offerings or otherwise offer us growth opportunities. In pursuing such acquisitions, we may face competition from other companies in the semiconductor industry. Our ability to acquire or invest in suitable targets may be limited by applicable laws and regulations in Taiwan, the United States and other jurisdictions where we do business. Even if we are successful in making such acquisitions or investments, we may have to expend substantial amounts of cash, incur debt, assume loss-making divisions and incur other types of expenses. We may also face challenges in successfully integrating any acquired companies into our existing organization or in creating the anticipated cost synergies. Each of these risks could have a material adverse effect on our business, financial condition and results of operations.

Table of Contents

The financial performance of our equity method investments could adversely affect our results of operations.

As part of our business strategy, we have and may continue to pursue acquisitions of businesses and assets, strategic alliances and joint ventures. We currently have equity investments in certain entities and the accounting treatment applied for these investments varies depending on a number of factors, including, but not limited to, our percentage ownership and the level of influence we have over the relevant entity. Any losses experienced by these entities could adversely affect our results of operations and the value of our investment. In addition, if these entities were to fail and cease operations, we may lose the entire value of our investment and the stream of any shared profits.

For example, on September 22, 2015, upon the expiration of the Initial SPIL Tender Offer period, we acquired 779,000,000 common shares (including those represented by American depositary shares) of SPIL through the Initial SPIL Tender Offer. We subsequently acquired an additional 258,300,000 common shares of SPIL (including those represented by American depositary shares) through open market purchases in March and April 2016. On January 16, 2018, we converted 9,690,452 American depositary shares of SPIL we owned into 48,452,260 common shares. As of March 16, 2018, we beneficially own 1,037,300,000 common shares of SPIL, representing 33.29% of the issued and outstanding share capital of SPIL (calculated based on 3,116,361,139 common shares of SPIL (including those represented by American depositary shares) outstanding as of February 28, 2018 as reported in SPIL's annual report on Form 20-F for the year ended December 31, 2017). See "Item 4. Information on the Company— History and Development of the Company—Acquisition of Common Shares and American Depositary Shares of SPIL." Although we are currently a 33.29% shareholder of SPIL, we currently do not control SPIL and do not have the power to direct SPIL or its management. As the investment in SPIL is accounted for using the equity method, to the extent that SPIL has net losses, our financial results will be adversely affected to the extent of our pro rata portion of these losses.

In addition, as we currently do not control SPIL and do not have the power to direct SPIL or its management, we do not have access to SPIL's books and records and may not be able to obtain SPIL's financial information on a timely basis. SPIL's reporting time for its financial statements may affect our ability to timely report our own financial statements or meet scheduled announcements for earnings releases.

There can be no assurance that we will be able to maintain or enhance the value or performance of our investee companies or that we will achieve the returns or benefits sought from such investments. If our interests differ from those of other investors in our investee companies, we may not be able to enjoy synergies with the investee and it may adversely affect our financial results or financial condition.

We may not be successful in our acquisition of 100% of SPIL shares not otherwise owned by us.

On September 22, 2015, upon the expiration of the Initial SPIL Tender Offer period, we acquired 779,000,000 common shares (including those represented by American depositary shares) of SPIL through the Initial SPIL Tender Offer. In December 2015, following an announcement by SPIL that it plans to issue 1,033 million shares, if approved by SPIL shareholders, to a third party pursuant to a share placement agreement, we submitted a written proposal to SPIL's Board proposing to acquire all SPIL shares not otherwise owned by ASE, contingent upon the termination of the share purchase agreement, and later launched the Second SPIL Tender Offer on December 29, 2015 to offer to purchase up to 770,000,000 common shares of SPIL (including those represented by American depositary shares). On March 17, 2016, we announced that the Second SPIL Tender Offer was unsuccessful because the Taiwan Fair Trade Commission (the "TFTC") did not render its decision before the expiration of the Second SPIL Tender Offer. The TFTC subsequently suspended its review on March 23, 2016. Notwithstanding the failure of the Second SPIL Tender Offer, we continued to seek control of SPIL, with the purpose of effecting an acquisition of 100% of the common shares and American depositary shares of SPIL. Under the Joint Share Exchange Agreement, a holding company in Taiwan will be established that would hold 100% of the equity interests of both ASE and SPIL such that ASE and SPIL would be wholly owned subsidiaries of such holding company, which would maintain all current operations of ASE and SPIL. See "Item 4. Information on the Company— History and Development of the Company—Acquisition of Common Shares and American Depositary Shares of SPIL."

Table of Contents

The successful consummation of the SPIL Acquisition is subject to a number of factors, including, among other things, obtaining all necessary antitrust or other regulatory approvals in Taiwan, the United States, the PRC and other jurisdictions where we do business. We received a no objection letter in respect of the Share Exchange from the TFTC on November 16, 2016. On May 15, 2017, we received a letter from the FTC confirming that the non-public investigation on the Share Exchange has been closed. On November 24, 2017, we received approval from the Ministry of Commerce of the People's Republic of China ("MOFCOM") for the Share Exchange under the condition that ASE and SPIL maintain independent operations, among other conditions, for 24 months. In the event these conditions cannot be satisfied, we may re-evaluate our interest in SPIL and may consider, among other legally permissible alternatives, to dispose our SPIL shares at a loss, which may significantly affect our financial position. Notwithstanding the above, even if we are successful in consummating the SPIL Acquisition, we will be subject to regulatory restrictions requiring us to maintain separate operation of SPIL for a period of time, and we may face challenges in successfully integrating SPIL into our existing organization or in realizing anticipated benefits and cost synergies afterwards. Each of these risks could have a material adverse effect on our business and operations, including our relationship with customers, suppliers, employees and other constituencies, or otherwise adversely affect our financial condition and results of operations.

There may be risks associated with the proposed holding company structure of SPIL Acquisition.

We entered into the Joint Share Exchange Agreement with SPIL in June 2016, pursuant to which ASE Holding, a holding company in Taiwan, will hold 100% of the equity interests in both ASE and SPIL such that ASE and SPIL will become wholly owned subsidiaries of ASE Holding. The proposed holding company will maintain all current operations of ASE and SPIL in Taiwan. The common shares of ASE and SPIL will be delisted from the TWSE. The ADSs of ASE and SPIL will be delisted from NYSE and NASDAQ, respectively, and will become eligible for deregistration under the Exchange Act. Subsequently, the common shares of ASE Holding will be listed on the TWSE, and the ADSs of ASE Holding will be listed on the NYSE. The implementation of such corporate structure restructuring plan may result in unforeseen contingent risks, including increase in tax liabilities or trading discounts relating to a holding company discount that may become apparent in the future.

The packaging and testing businesses are capital intensive. If we cannot obtain additional capital when we need it, our growth prospects and future profitability may be adversely affected.

The packaging and testing business is capital intensive. We will need capital to fund the expansion of our facilities as well as fund our research and development activities in order to remain competitive. We believe that our existing cash, marketable securities, expected cash flow from operations and existing credit lines under our loan facilities will be sufficient to meet our capital expenditures, working capital, cash obligations under our existing debt and lease arrangements, and other requirements for at least the next twelve months. However, future capacity expansions or market or other developments may cause us to require additional funds. Our ability to obtain external financing in the future is subject to a variety of uncertainties, including:

- our future financial condition, results of operations and cash flows;
- general market conditions for financing activities by semiconductor or electronics 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 results of operations and financial conditions may be materially and adversely affected.

Restrictive covenants and broad default provisions in our existing debt agreements may materially restrict our operations as well as adversely affect our liquidity, financial condition and results of operations.

We are a party to numerous loans and other agreements relating to the incurrence of debt, which may include restrictive covenants and broad default provisions. In general, covenants in the agreements governing our existing debt, and debt we may incur in the future, may materially restrict our operations, including our ability to incur debt, pay dividends, make certain investments and payments, other than in connection with restructurings of consolidated entities, and encumber or dispose of assets. In addition, any global economic deterioration or ineffective expansion may cause us to incur significant net losses or force us to assume considerable liabilities. We cannot assure you that we will be able to remain in compliance with our financial covenants, which, as a result, may lead to a default. This may thereby restrict our ability to access unutilized credit facilities or the global capital markets to meet our liquidity needs. Furthermore, a default under any agreement by us or our subsidiaries may trigger cross-defaults under our other agreements. In the event of default, we may not be able to cure the default or obtain a waiver on a timely basis. An event of default under any agreement timely governing our existing or future debt, if not cured or waived, could have a material adverse effect on our liquidity, financial condition and results of operations.

Table of Contents

We have on occasion failed to comply with certain financial covenants in some of our loan agreements. Such non-compliance may also have, through broadly worded cross-default provisions, resulted in default under some of the agreements governing our other existing debt. For example, we failed to comply with certain financial covenants in some of our loan agreements as a result of our acquisition of the controlling interest of Universal Scientific in February 2010, for which we have timely obtained waivers from our counterparties. If we are unable to timely remedy any of our non-compliance under such loan agreements or obtain applicable waivers or amendments, we would breach our financial covenants and our financial condition would be adversely affected. As of December 31, 2017, we were not in breach of any of the financial covenants under our existing loan agreements, although we cannot provide any assurance that we will not breach any of such financial covenants in the future.

We depend on select personnel and could be affected by the loss of their services.

We depend on the continued service of our executive officers and skilled technical personnel. Our business could suffer if we lose the services of any of these personnel and cannot adequately replace them. Although some of these management personnel have entered into employment agreements with us, they may nevertheless leave before the expiration of these agreements. We are not insured against the loss of the services of any of our personnel. In addition, these proceedings may divert these and other employees' attention from our business operations.

In addition, we may be required to increase substantially the number of these employees in connection with our expansion plans, and there is intense competition for their services in this industry. We may not be able to either retain our present personnel or attract additional qualified personnel as and when needed. In addition, we may need to increase employee compensation levels in order to attract and retain our existing officers and employees and the additional personnel that we expect to require. Furthermore, a portion of the workforce at our facilities in Taiwan are foreign workers employed under work permits, which are subject to government regulations on renewal and other terms. Consequently, our business could also suffer if the Taiwan regulations 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 a reasonable cost.

If we are unable to obtain additional packaging and testing equipment or facilities in a timely manner and at a reasonable cost, our competitiveness and future profitability may be adversely affected.

The semiconductor packaging and testing businesses are capital intensive and require significant investment in expensive equipment manufactured by a limited number of suppliers. The market for semiconductor packaging and testing 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 a significant amount of such equipment from a limited number of suppliers. From time to time we have also leased certain equipment. We have no binding supply agreements with any of our suppliers and acquire our packaging and testing equipment on a purchase order basis,

which exposes us to changing market conditions and other substantial risks. For example, shortages of capital equipment could result in an increase in the price of equipment and longer delivery times. Semiconductor packaging and testing also require 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 adversely affect our growth prospects as well as financial condition and results of operations. See "Item 4. Information on the Company—Business Overview—Equipment."

Fluctuations in exchange rates could result in foreign exchange losses.

Currently, the majority of our revenues are denominated in U.S. dollars, with a portion denominated in NT dollars and Japanese yen. Our operating costs and operating expenses, on the other hand, are incurred in several currencies, primarily NT dollars, U.S. dollars, RMB, Japanese yen, Korean won, as well as, to a lesser extent, Singapore dollars and Malaysian ringgit. In addition, a substantial portion of our capital expenditures, primarily for the purchase of packaging and testing equipment, has been, and is expected to continue to be, denominated in U.S. dollars, with the remainder in Japanese yen. Fluctuations in exchange rates, primarily among the U.S. dollar against the NT dollar, the Japanese yen and RMB, will affect our costs and operating margins. In addition, these fluctuations could result in exchange losses and increased costs in NT dollar and other local currency terms. Despite hedging and mitigating techniques implemented by us, fluctuations in exchange rates have affected, and may continue to affect, our financial condition and results of operations. We recognized net foreign exchange losses of NT\$713.2 million in 2015, net foreign exchange gains of NT\$1,928.4 million in 2016 and net foreign exchange gains of NT\$3,502.6 million (US\$118.2 million) in 2017. We cannot assure you that we will achieve foreign exchange gains in the future. See "Item 11. Quantitative and Qualitative Disclosures about Market Risk—Market Risk—Foreign Currency Exchange Rate Risk."

Table of Contents

The loss of a large customer or disruption of our strategic alliance or other commercial arrangements with semiconductor foundries and providers of other complementary semiconductor manufacturing services may result in a decline in our revenues and profitability.

Although we have a large customer base, we have derived and expect to continue to derive a large portion of our revenues from a small group of customers during any particular period due in part to the concentration of market share in the semiconductor and electronics industries. Our five largest customers together accounted for approximately 48.2%, 42.0% and 46.4% of our operating revenues in 2015, 2016 and 2017, respectively. One customer accounted for more than 10.0% of our operating revenues in 2015, 2016 and 2017. The demand for our services from a customer is directly dependent upon that customer's level of business activity, which could vary significantly from year to year. Our key customers typically operate in the cyclical semiconductor and electronic business and, in the past, have varied, and may vary in the future, order levels significantly from period to period. Some of these companies are relatively small, have limited operating histories and financial resources, and are highly exposed to the cyclicity of the industry. We cannot assure you that these customers or any other customers will continue to place orders with us in the future at the same levels as in past periods. The loss of one or more of our significant customers, or reduced orders by any one of them, and our inability to replace these customers or make up for such orders, could adversely affect our revenues and profitability. In addition, we have in the past reduced, and may in the future be requested to reduce, our prices to limit the level of order cancellations. Any price reduction would likely reduce our margins and profitability.

Since 1997, we have maintained a strategic alliance with Taiwan Semiconductor Manufacturing Company Limited, or TSMC, one of the world's largest dedicated semiconductor foundries. TSMC designates us as their non-exclusive preferred provider of packaging and testing services for semiconductors manufactured by TSMC. In May 2015, we entered into a joint venture agreement with TDK Corporation to further expand our business in embedded substrates. Furthermore, we entered into a joint venture agreement with Qualcomm Incorporated to expand our SiP business in February 2018. Such strategic alliances, as well as our other commercial arrangements with providers of other complementary semiconductor manufacturing services, enable us to offer total semiconductor manufacturing solutions to our customers. These strategic alliances and other commercial arrangements may not achieve their anticipated commercial benefits and may be terminated at any time. Any failure in successfully maintaining such alliances, any termination of such alliances or our failure to enter into substantially similar strategic alliances or commercial arrangements may adversely affect our competitiveness and our revenues and profitability.

We rely on a limited number of key customers in certain products for our revenues, and our results of operations may be adversely affected by a reduction of business from our key customers.

Our results of operations also depends on the performance and business of our key customers. Accordingly, risks that could seriously harm our key customers could harm us as well, including:



- loss of market share for our key customers' products;
- recession in our key customers' markets;
- failure of their products to gain wide-spread commercial acceptance; and
- our key customers' inability to manage their operations efficiently and effectively.

## Table of Contents

The launch and market acceptance of our individual key customers' products could significantly impact our product and customer mix, resulting in significant volatility in the demand for the solutions we offer and our results of operations. It is also possible that a key customer's market share with respect to its product may decline as its competitors introduce new products, which could adversely affect our results of operations, particularly if we are unable to sell our solutions to such competitors. Furthermore, sales of our key customers' products are subject to seasonal fluctuation.

Our revenues and profitability may decline if we are unable to obtain adequate supplies of raw materials in a timely manner and at a reasonable price.

Our operations, such as packaging operations, substrate operations and electronic manufacturing services, require that we obtain adequate supplies of raw materials on a timely basis. Shortages in the supply of raw materials have in the past resulted in occasional price increases and delivery delays. In addition, the operations of some of our suppliers are vulnerable to natural disasters, such as earthquakes and typhoons, the occurrences of which may deteriorate and prolong the shortage or increase the uncertainty of the supply of raw materials. For example, on March 11, 2011, a major earthquake occurred off the coast of Japan resulting in a large tsunami and radiation leak at the Fukushima nuclear power plant. We experienced a disruption to the supply of raw materials from Japan for about three to four weeks due to the fear of radiation contamination and the reduction or postponement in production by some of our Japanese suppliers. Although the purchase of supplies from Japan has been restored to the previous level, we cannot assure you that we will not suffer long-term from the impact of the earthquake and the tsunami. In addition, further earthquakes, aftershocks thereof or other disasters in Japan or other regions in which we operate may cause a decline in our sales. Any of the above events or developments may have a material adverse effect on our business, results of operations and financial condition.

Raw materials such as IC substrates are prone to supply shortages since such materials are produced by a limited number of suppliers, such as Kinsus Interconnect Technology Corporation, Nanya Printed Circuit Board Corporation, Unimicron Technology Corp. and LG Innotek Co., Ltd. Our operations conducted through our wholly owned subsidiaries ASE Electronics and ASE Shanghai have improved our ability to obtain IC substrates on a timely basis and at a reasonable cost. In 2017, our interconnect materials operations supplied approximately 25.9% of our consolidated substrate requirements by value. We do not expect that our internal interconnect materials operations will be able to meet all of our interconnect materials requirements. Consequently, we will remain dependent on market supply and demand for our raw materials. In addition, recent fluctuations in prices of precious metals, such as gold, have also affected the price at which we have been able to purchase the principal raw materials we use in our packaging processes. We cannot guarantee that we will not experience shortages in the near future or that we will be able to obtain adequate supplies of raw materials in a timely manner or at a reasonable price. Our revenues and net income could decline if we are unable to obtain adequate supplies of high quality raw materials in a timely manner or if there are significant increases in the costs of raw materials that we cannot pass on to our customers.

Regulations related to conflict minerals could adversely affect our business, financial condition and results of operations.

The Dodd-Frank Wall Street Reform and Consumer Protection Act contains provisions to improve transparency and accountability concerning the supply of certain minerals, known as conflict minerals, which are defined as cassiterite, columbite-tantalite, gold, wolframite or their derivatives and other minerals determined by the U.S. government to be financing conflict in the Democratic Republic of Congo and adjoining countries. As a result, in August 2012 the SEC adopted annual disclosure and reporting requirements for those companies who use conflict minerals in their products. These rules require companies that manufacture or contract to manufacture products for which conflict minerals are necessary to the functionality or production to begin scrutinizing the origin of conflict minerals in their products starting from January 1, 2013, and file a new form, Form SD, containing the conflict minerals disclosure by May 31 for the prior calendar year, beginning May 31, 2014. We filed a specialized disclosure report on Form SD for the years ended December 31, 2013, 2014, 2015 and 2016 on May 30, 2014, June 1, 2015, May 31, 2016 and May 31, 2017, respectively. Pursuant to the SEC rules governing conflict minerals disclosures, we have engaged an independent auditing firm to conduct audits on our due diligence framework to provide a private sector report for our specialized disclosure report on Form SD for the years ended December 31, 2014, 2015, 2016 and 2017. As a result, there will be costs associated with complying with these disclosure requirements, including costs for diligence to determine the sources of conflict minerals used in our products and other potential changes to products, processes or sources of supply as a consequence of such verification activities. The implementation of these rules could adversely affect the sourcing, supply and pricing of materials used in our products.

Table of Contents

As there may be only a limited number of suppliers offering “conflict free” minerals, we cannot be sure that we will be able to obtain necessary “conflict free” minerals from such suppliers in sufficient quantities or at competitive prices. Also, we may face adverse effects to our reputation if we determine that certain of our products contain minerals not determined to be conflict free or if we are unable to sufficiently verify the origins for all conflict minerals used in our products through the procedures we may implement.

System security risks, data protection breaches or unexpected system outage or failures could harm our business, financial condition and results of operations.

We rely on the efficient and uninterrupted operation of complex information technology applications, systems and networks to operate our business. Our systems are vulnerable to damage or interruption from earthquakes, terrorist attacks, floods, fires, power loss, telecommunications failures, cyber-attacks, computer viruses, computer denial of service attacks or other attempts to harm our system, and similar events. In recent years, the risks that we face from cyber-attacks have increased significantly. Some of these attacks may originate from well-organized, highly skilled organizations. Although there have not been reported major cyber-attacks against our systems in the recent years, any such attack or system or network disruption could result in a loss of our intellectual property, the release of commercially sensitive information, customer or employee personal data. Failures to protect the privacy of customer and employee confidential data against breaches of network security could result in damage to our reputation.

Furthermore, some of our data centers are located in areas with a high risk of major earthquakes. Our data centers are also subject to break-ins, sabotage and intentional acts of vandalism, and to potential disruptions if the operators of these facilities have financial difficulties. Some of our systems are not fully redundant, and our disaster recovery planning cannot account for all eventualities. The occurrence of a natural disaster, a decision to close a facility we are using without adequate notice for financial reasons or other unanticipated problems at our data centers could result in loss of production capabilities and lengthy interruptions in our service. Any damage to or failure of our systems could result in interruptions in our service. Interruptions in our service could materially and adversely affect our business, financial condition and results of operations.

Any environmental claims or failure to comply with any present or future environmental regulations, as well as any fire or other industrial accident, may require us to spend additional funds and may materially and adversely affect our financial condition and results of operations.

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 packaging and interconnect materials production processes, and the emission of volatile organic compounds and the discharge and disposal of solid industrial wastes from electronic manufacturing services operations. In the recent years, we have been subject to environmental administrative actions and judicial proceedings related to certain wastewater discharge incidents that occurred at our facilities. As a result of these proceedings, we have been subject to monetary fines as well as sanctions, including orders to suspend or limit our operations and criminal charges against us.

On December 20, 2013, the Kaohsiung Environmental Protection Bureau imposed a fine of NT\$102.0 million (the “Administrative Fine”) upon us for alleged violations of the Water Pollution Control Act. We filed an administrative appeal to nullify the Administrative Fine, which was dismissed by the Kaohsiung City Government. In August 2014, we appealed to the Kaohsiung High Administrative Court seeking to (i) revoke Kaohsiung City Government’s decision, (ii) lift the administrative penalty imposed on us and (iii) demand a refund of the Administrative Fine. On March 22, 2016, the Kaohsiung High Administrative Court revoked Kaohsiung City Government’s decision and lifted the administrative penalty. Our demand for a refund of the Administrative Fine was dismissed. We appealed to the Supreme Administrative Court on April 14, 2016 against the Kaohsiung High Administrative Court’s unfavorable ruling in dismissing a refund. On June 8, 2017, the Supreme Administrative Court overturned Kaohsiung High Administrative Court’s decision and ordered Kaohsiung Environmental Protection Bureau to refund the Administrative Fine paid by us.

Table of Contents

In connection with the same alleged violations at our K7 plant, in October 2014, the Kaohsiung District Court ruled that we were in violation of the ROC Waste Disposal Act and imposed on us a criminal penalty of NT\$3.0 million. We appealed the case to the Taiwan High Court Kaohsiung District Branch in November 2014. On September 29, 2015, the Taiwan High Court Kaohsiung District Branch overturned the decision made by Kaohsiung District Court and found us not guilty and repealed the criminal penalty imposed on us. The verdict was final and not appealable. For additional details of these administrative actions and judicial proceedings related to our K7 Plant see “Item 4. Information on the Company—Business Overview—Environmental Matters,” “Item 4. Information on the Company—Property, Plants and Equipment” and “Item 8. Financial Information—Consolidated Statements and Other Financial Information—Legal Proceedings.” Defending against any of these pending or future actions will likely be costly and time-consuming and could significantly divert management’s efforts and resources. Any penalties, fines, damages or settlements made in connection with any criminal, civil, and/or administrative investigations and/or lawsuits may have a material adverse effect on our business, results of operations and future prospects.

We have made, and expect to continue to make, expenditures to maintain strict compliance with such environmental laws and regulations. For example, in order to demonstrate our commitment to environmental protection, in December 2013, our board of directors approved contributions to environmental protection efforts in Taiwan in a total amount of not less than NT\$3,000.0 million, to be made in the next 30 years. For the years ended December 31, 2015, 2016 and 2017, we have made contributions in the amount of NT\$100.0 million (US\$3.4 million) each, respectively, through ASE Cultural and Educational Foundation to fund various environmental projects, and our board of directors have resolved in a resolution in January 2018 to contribute NT\$100.0 million (US\$3.4 million) through ASE Cultural and Educational Foundation in environmental projects in 2018. The costs of current and future compliance with environmental laws and regulations could require us to acquire costly equipment or to incur other significant expenses that may have a material adverse effect on our financial condition and results of operations.

Negative publicity may adversely affect our brand and reputation, which may result in a material adverse impact on our business, results of operations and prospects and cause fluctuations in the price of our common shares and ADSs.

Any negative publicity may damage our brand and reputation, harm our ability to attract and retain customers and result in a material adverse impact on our results of operations and prospects as well as cause fluctuations in the trading price of our common shares and ADSs. In addition, any change in policy or directions in which we carry out our corporate social responsibility or corporate sustainability activities may also have an adverse effect on our reputation. Furthermore, in recent years, we have experienced and may continue to experience negative publicity in connection with administrative penalties and criminal charges related to alleged violations of environmental regulations and laws. For further details, see “—Any environmental claims or failure to comply with any present or future environmental regulations, as well as any fire or other industrial accident, may require us to spend additional funds and may materially and adversely affect our financial condition and results of operations,” “Item 4. Information on the Company—Business Overview—Environmental Matters,” “Item 4. Information on the Company—Property, Plants and Equipment” and “Item 8. Financial Information—Consolidated Statements and Other Financial Information—Legal Proceedings.”

Climate change and other environmental concerns may negatively affect our business.

There is increasing concern that climate change is occurring and may have dramatic effects on human activity without aggressive remediation steps. A modest change in temperature would result in increased coastal flooding, changing precipitation patterns and increasing risk of extinction for the world's species. Public expectations for reductions in greenhouse gas emissions could result in increased energy, transportation and raw material costs. Scientific examination of, political attention to and rules and regulations on issues surrounding the existence and extent of climate change may result in an increase in the cost of production due to increase in the prices of energy and introduction of energy or carbon tax. Various regulatory developments have been introduced that focus on restricting or managing emissions of carbon dioxide, methane and other greenhouse gases. Enterprises may need to purchase at higher costs emission credits, new equipment or raw materials with lower carbon footprints. These developments and further legislation that is likely to be enacted could negatively affect our operations. Changes in environmental regulations, such as those on the use of perfluorinated compounds, could increase our production costs, which could adversely affect our results of operation and financial condition.

Table of Contents

In addition, more frequent droughts and floods, extreme weather conditions and rising sea levels could occur due to climate change. The impact of such changes could be significant as most of our factories are located in islands including Taiwan, Singapore, Korea and Malaysia. For example, transportation suspension caused by extreme weather conditions could harm the distribution of our products. Similarly, our operations depend upon adequate supplies of water, and extended or serious droughts may affect our ability to obtain adequate supplies of water and threaten our production. We cannot predict the economic impact, if any, of disasters or climate change.

Furthermore, increasing climate change and environmental concerns could affect the results of our operations if any of our customers request that we exceed any standards set for environmentally compliant products and services, or if raw materials and/or products are required to meet strict inspection standards with respect to any radioactive contamination as a result of concerns arising from radiation leaking incidents, such as the radiation leak occurred in March 2011 in Japan. If we are unable to offer products that are in compliance with relevant environmental standards, or such products become less reliable due to the lack of reasonably available alternative technologies, it may harm our results of operations.

We may be subject to intellectual property rights disputes, which could materially adversely affect our business.

Our ability to compete successfully and achieve future growth depends, in part, on our ability to develop and protect our proprietary technologies and to secure on commercially acceptable terms certain technologies that we do not own. We cannot assure you that we will be able to independently develop, obtain patents for, protect or secure from any third party, the technologies required. Our failure to successfully obtain such technology may seriously harm our competitive position.

Our ability to compete successfully also depends, in part, on our ability to operate without infringing the proprietary rights of others. We have no means of knowing what patent applications have been filed in the United States or elsewhere until they are granted or published. In particular, the semiconductor and electronics industries are characterized by frequent litigation regarding patent and other intellectual property rights. It is common for patent owners to assert their patents against semiconductor manufacturers. We have received from time to time communication from third parties asserting patents that cover certain of our technologies and alleging infringement of intellectual property rights of others, and we may continue receiving such communication in the future. In the event that any third party makes a valid claim against us or against our customers, we could be required to:

- seek to acquire licenses to the infringed technology which may not be available on commercially reasonable terms, if at all;

- discontinue using certain process technologies, which could cause us to stop manufacturing certain semiconductors;



pay substantial monetary damages; and/or

seek to develop non-infringing technologies, which may not be feasible.

Any one of these developments could place substantial financial and administrative burden on us and hinder our business. In February 2006, Tessera filed a suit against us and others alleging patent infringement. In February 2014, ASE Inc. and our U.S. subsidiary, ASE (U.S.) Inc. reached a term sheet agreement with Tessera to fully resolve the remaining legal proceedings between each other, under which we would pay a total of US\$30.0 million to Tessera (which was fully recognized by us in the fourth quarter of 2013) and both Tessera and we would dismiss all pending claims against each other. The final settlement agreement was entered into among the parties in October 2014 and the final settlement amount was reduced to US\$27.0 million. In October 2014, the United States District Court for the Northern District of California dismissed all claims between Tessera and us. We have fully paid the settlement amount in January 2015 and reversed the settlement amount of US\$3.0 million in the fourth quarter of 2014.

Any litigation, whether as plaintiff or defendant and regardless of the outcome, is costly and diverts company resources. Any of the foregoing could harm our competitive position and render us unable to provide some of our services operations.

Table of Contents

Our major shareholders may take actions that are not in, or may conflict with, our public shareholders' best interest.

Members of the Chang family own, directly or indirectly, a significant interest in our outstanding common shares. See "Item 7. Major Shareholders and Related Party Transactions—Major Shareholders." Accordingly, these shareholders will continue to have the ability to exercise a significant influence over our business, including matters relating to:

our management and policies;

the timing and distribution of dividends; and

the election of our directors.

Members of the Chang family may take actions that you may not agree with or that are not in our or our public shareholders' best interests.

We are an ROC company and, because the rights of shareholders under ROC law differ from those under U.S. law and the laws of certain other countries, you may have difficulty protecting your shareholder rights.

Our corporate affairs are governed by our Articles of Incorporation and by the laws governing corporations incorporated in the ROC. The rights of shareholders and the responsibilities of management and the members of the board of directors under ROC law are different from those applicable to a corporation incorporated in the United States and certain other countries. As a result, public shareholders of ROC companies may have more difficulty in protecting their interests in connection with actions taken by management or members of the board of directors than they would as public shareholders of a corporation in the United States or certain other countries.

We have made investments in, and are exploring the possibility of expanding our businesses and operations to, or making additional investments in, the PRC, which may expose us to additional political, regulatory, economic and foreign investment risks.

We currently maintain packaging and testing facilities and electronic manufacturing services sites in the PRC. We also made substantial investments in PRC real estate development through our subsidiaries in the PRC. Under PRC laws and regulations, foreign investment projects, such as our subsidiaries, must obtain certain approvals from the relevant governmental authorities in the provinces or special economic zones in which they are located and, in some circumstances, from the relevant authorities in the PRC's central government. Foreign investment projects must also

comply with certain regulatory requirements. However, PRC laws and regulations are often subject to varying interpretations and means of enforcement, and additional approvals from the relevant governmental authorities may be required for the operations of our PRC subsidiaries. If required, we cannot assure you that we will be able to obtain these approvals in a timely manner, if at all. Because the PRC government holds significant discretion in determining matters relating to foreign investment, we cannot assure you that the relevant governmental authorities will not take action that is materially adverse to our PRC operations.

In addition, the PRC stock market is subject to extreme price and volume fluctuations. We are the controlling shareholder of Universal Scientific Shanghai, which is an entity currently listed on the Shanghai Stock Exchange. The PRC securities markets have recently experienced, and may experience in the future, significant volatility. Any volatility may have a significant effect on Universal Scientific Shanghai's share price and may indirectly affect the market price of our common shares and ADSs.

Our global manufacturing and sales activities subject us to risks associated with legal, political, economic or other conditions or developments in various jurisdictions, including in particular the ROC and the PRC, which could negatively affect our business and financial status and therefore the market value of your investment.

Our principal executive office and our principal production facilities are located in the ROC, and a substantial majority of our net revenues are derived from our operations in the ROC and the PRC. In addition, we have operations worldwide and a significant percentage of our revenue comes from sales to locations outside the ROC or the PRC. Operating in the ROC, PRC and other overseas locations exposes us to changes in policies and laws, including environmental regulations, as well as the general political and economic conditions, security risks, health conditions and possible disruptions in transportation networks, in the various countries in which we operate, which could result in an adverse effect on our business operations in such countries. If any of our global operations are affected by the legal, political, economic or other conditions in the jurisdiction we operate, our results of operations as well as market price and the liquidity of our ADSs and common shares may be materially and adversely affected.

Table of Contents

Any impairment charges may have a material adverse effect on our net income.

Under IFRS, we are required to evaluate our assets, such as property, plant and equipment, intangible assets, including goodwill, and investments in financial instruments, for possible impairment at least annually or whenever there is an indication of impairment. If certain criteria are met, we are required to record an impairment charge.

With respect to assets, we recognized impairment charges of NT\$258.1 million, NT\$980.1 million and NT\$764.9 million (US\$25.8 million) in 2015, 2016 and 2017, respectively, primarily as a result of an impairment charge related to buildings and improvement, and impaired equipment and investment. See “Item 5. Operating and Financial Review and Prospects—Operating Results and Trend Information—Critical Accounting Policies and Estimates—Impairment of Tangible and Intangible Assets Other Than Goodwill,” “Item 5. Operating and Financial Review and Prospects—Operating Results and Trend Information—Critical Accounting Policies and Estimates—Valuation of Investments” and “Item 5. Operating and Financial Review and Prospects—Operating Results and Trend Information—Critical Accounting Policies and Estimates—Goodwill.”

We are unable to estimate the extent and timing of any impairment charges for future years and we cannot give any assurance that impairment charges will not be required in periods subsequent to December 31, 2017. Any impairment charge could have a material adverse effect on our net income. The determination of an impairment charge at any given time is based significantly on our expected results of operations over a number of years in the future. As a result, an impairment charge is more likely to occur during a period in which our operating results and outlook are otherwise already depressed.

Table of Contents

Any failure to achieve and maintain effective internal controls could have a material adverse effect on our business and results of operations.

We are subject to reporting obligations under the U.S. securities laws. The SEC as required by Section 404 of the Sarbanes-Oxley Act of 2002 adopted rules requiring every public company to include a management report on the effectiveness of such company's internal control over financial reporting in its annual report. In addition, an independent registered public accounting firm must report on such company's internal control over financial reporting.

Our management concluded that our internal control over financial reporting was effective as of December 31, 2017 and our independent registered public accounting firm has issued an attestation report concluding that our internal control over financial reporting was effective in all material aspects. As effective internal control over financial reporting is necessary for us to produce reliable financial reports and is important to help prevent fraud, any failure to maintain effective internal control over financial reporting could harm our business and result in a loss of investor confidence in the reliability of our financial statements, which in turn could negatively impact the trading price of our common shares and ADSs. Furthermore, we may need to incur additional costs and use additional management and other resources in an effort to comply with Section 404 of the Sarbanes-Oxley Act and other requirements going forward.

***Our insurance coverage may be inadequate to cover all of our business risks.***

Although we seek to obtain insurance for some of our main operational risks, the amount of our insurance coverage may not be adequate to cover all potential claims or liabilities, and we may be forced to bear substantial costs resulting from risks and uncertainties of our business. There is also no guarantee that we will be able to obtain insurance coverage when desired or that insurance will be available on commercially attractive terms. Any failure to obtain adequate insurance coverage on terms favorable to us, or at all, could have a material adverse effect on our business, financial condition and results of operations.

We could potentially face tax uncertainties arising from the decisions, activities, and operations undertaken by us.

There are many business activities that may give rise to tax issues in our daily operations, ranging from procurement, research and development activities, manufacturing to product storage and distribution, among other activities. Additional tax liabilities such as double taxation, inapplicability of tax incentives, tax adjustment and related interest and penalties may arise if all these tax issues are not dealt with properly. The development and evolution of tax laws and regulations present considerable uncertainties in interpretation and enforcement, which could call for more onerous compliance measures and tax audits in the jurisdictions in which we operate. Failure to comply with any change in tax laws could result in unfavorable tax consequences to us and have an adverse impact on our business, financial condition and results of operations.

Uncertainty under United States corporate income tax reform legislation could adversely affect our operating results and financial condition.

The United States recently enacted tax reform legislation (the “Tax Reform Legislation”) that, among other things, reduced the U.S. federal corporate income tax rate from 35% to 21% and imposes an alternative “base erosion and anti-abuse tax” (“BEAT”) on U.S. corporations that make deductible payments to foreign related persons in excess of specified amounts. The reduction in the U.S. federal corporate income tax rate is expected to be beneficial to us in future years in which our consolidated U.S. subsidiaries have net income subject to U.S. tax.

## Table of Contents

There are a number of uncertainties and ambiguities as to the interpretation and application of many of the provisions in the Tax Reform Legislation, including the provisions relating to the BEAT. In the absence of guidance on these issues, we will use what we believe are reasonable interpretations and assumptions in interpreting and applying the Tax Reform Legislation for purposes of determining our income tax payable and results of operations, which may change as we receive additional clarification and implementation guidance. It is also possible that the U.S. Internal Revenue Service could issue subsequent guidance or take positions on audit that differ from the interpretations and assumptions that we previously made, which could have a material adverse effect on our cash tax liabilities, results of operations and financial condition.

## **Risks Relating to Taiwan, ROC**

Strained relations between the ROC and the PRC and disruptions in Taiwan's political environment caused by domestic political events could negatively affect our business and the market value of your investment.

Our principal executive offices and our principal facilities are located in Taiwan and approximately 46.9%, 48.6% and 47.6% of our operating revenues in 2015, 2016 and 2017, respectively, were derived from our operations in Taiwan. Accordingly, our business and financial condition may be affected by changes in local governmental policies and political and social instability.

The ROC has a unique international political status. The government of the PRC asserts sovereignty over all of China, including Taiwan, and does not recognize the legitimacy of the ROC government. Although significant economic and cultural relations have been established in recent years between the ROC and the PRC, relations have often been strained. Any major change in the Taiwanese political environment, including the outcome of presidential or municipal elections, or potential shifts in government policy, may affect the direction of economic and political developments and negatively impact the economic and political environment in Taiwan. Past developments related to the interaction between the ROC and the PRC, domestic political events or election results have on occasion depressed the market prices of the securities of Taiwanese or Taiwan-related companies, including our own. Relations between the ROC and the PRC and other factors affecting the political or economic conditions 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 and ADSs.

Currently, we manufacture interconnect materials in the PRC through our wholly owned subsidiary, ASE Shanghai. We also provide packaging and testing services in the PRC through some of our subsidiaries. In addition, we engage in the PRC in real estate development and the manufacture of computer peripherals and electronic components through our subsidiaries in the PRC. See "Item 4. Information on the Company—Organizational Structure—Our Consolidated Subsidiaries." In the past, ROC companies, including ourselves, were prohibited from investing in facilities for the packaging and testing of semiconductors in the PRC. Although the prohibitions have been relaxed since February 2010, the ROC government currently still restricts certain types of investments by ROC companies, including ourselves, in the PRC. We do not know when or if such laws and policies governing investment in the PRC

will be amended, and we cannot assure you that such ROC investment laws and policies will permit us to make further investments of certain types in the PRC in the future that we consider beneficial to us. Our growth prospects and profitability may be adversely affected if we are restricted from making certain additional investments in the PRC and are not able to fully capitalize on the growth of the semiconductor industry in the PRC.

As a substantial portion of our business and operations is located in Taiwan, we are vulnerable to earthquakes, typhoons, drought and other natural disasters, as well as power outages and other industrial incidents, which could severely disrupt the normal operation of our business and adversely affect our results of operations.

Taiwan is susceptible to earthquakes and has experienced severe earthquakes which caused significant property damage and loss of life, particularly in the central and eastern parts of Taiwan. Earthquakes have damaged production facilities and adversely affected the operations of many companies involved in the semiconductor and other industries. For example, in February 2016, an earthquake measuring 6.4 on the Richter magnitude scale occurred in Kaohsiung caused several death and property damages. However, the earthquake did not have a material impact on our operations. We have never experienced structural damage to our facilities or damage to our machinery and equipment as a result of these earthquakes. In the past, however, we have experienced interruptions to our production schedule primarily as a result of power outages caused by earthquakes.



Table of Contents

Taiwan is also susceptible to typhoons, which may cause damage and business interruptions to companies with facilities located in Taiwan. For example, on September 14, 2016, Taiwan experienced severe damage from typhoon Meranti that caused severe flooding, extensive property damage and loss of electricity for thousands of households. Taiwan has experienced severe droughts in the past. Although we have not been directly affected by droughts, we are dependent upon water for our packaging and substrates operations and a drought could interrupt such operations. In addition, a drought could interrupt the manufacturing process of the foundries located in Taiwan, in turn disrupting some of our customers' production, which could result in a decline in the demand for our services. In addition, the supply of electrical power in Taiwan, which is primarily provided by Taiwan Power Company, the state-owned electric utility, is susceptible to disruption that could be prolonged and frequent, caused by overload as a result of high demand or other reasons.

Kaohsiung is one of the major industrial cities in Taiwan. Our testing and packaging businesses have been founded in Kaohsiung and currently our primary testing and packaging operations are located in Kaohsiung. In July 2014, following leaks from underground propene pipes, a series of propene pipeline explosions occurred in the Cian-Jhen and Ling-Ya districts of Kaohsiung. 32 people were killed and 321 others were injured from this incident. Although we have not been directly affected by the explosion, future industrial incidents could negatively affect our operation and result in interruption or delay of our operation or production capacity.

On August 15, 2017, Taiwan suffered a massive power blackout, which left millions of homes, offices and factories without power. Although the power blackout did not have a material impact on our operations, future power blackout may disrupt our business operations and adversely affect our results of operations.

Our production facilities as well as many of our suppliers and customers and providers of complementary semiconductor manufacturing services, including wafer foundries, are located in Taiwan. If our customers are affected by an earthquake, a typhoon, a drought or any other natural disasters, or power outage or other industrial incidents, it could result in a decline in the demand for our services. If our suppliers or providers of complementary semiconductor manufacturing services are affected, our production schedule could be interrupted or delayed. As a result, a major earthquake, typhoon, drought or other natural disaster in Taiwan, or a power outage or other industrial incident could severely disrupt the normal operation of our business and have a material adverse effect on our financial condition and results of operations.

We face risks related to health epidemics and outbreaks of contagious diseases, including H5N1 influenza, H7N9 influenza, H9N2 influenza, Severe Acute Respiratory Syndrome, or SARS, Middle East Respiratory Syndrome, or MERS, Ebola virus and Zika virus.

There have been reports of outbreaks of a highly pathogenic influenza caused by the H5N1, H7N9 and H9N2 viruses, in certain regions of Asia and other parts of the world. In recent years, Ebola virus disease broke out in West Africa, with a number of people having died of the disease in countries such as Guinea, Sierra Leone and Liberia. There are also cases of patients diagnosed with Ebola in the United States and Europe. In addition, Zika virus disease broke out

in the Americas in 2015 and is currently ongoing, infecting people throughout South America, Central America, Mexico and the Caribbean. The disease is strongly linked to cases of microcephaly and Guillain–Barré syndrome in Brazil. An outbreak of such contagious diseases in the human population could result in a widespread health crisis that could adversely affect the economies and financial markets of many countries. Additionally, a recurrence of SARS, a highly contagious form of atypical pneumonia, similar to the occurrence in 2003, which affected the PRC, Hong Kong, Taiwan, Singapore, Vietnam and certain other countries, and MERS, a viral respiratory infection which affected South Korea in 2015, would also have similar adverse effects. Since most of our operations and customers and suppliers are based in Asia (mainly in Taiwan and the PRC), an outbreak of H5N1 influenza, H7N9 influenza, H9N2 influenza, SARS, MERS, Ebola, Zika virus or other contagious diseases in Asia or elsewhere, or the perception that such an outbreak could occur, and the measures taken by the governments of countries affected, including the ROC and the PRC, could adversely affect our business, financial condition or results of operations.

Table of Contents

Escalation of tensions between South Korea and North Korea could have an adverse effect on our operations in South Korea and the market value of our shares.

Relationship between South Korea and North Korea have been tense throughout Korea's modern history. The level of tension between the two Koreas has fluctuated and may increase abruptly as a result of current and future events. In recent years, there have been heightened security concerns stemming from North Korea's nuclear weapons and ballistic missile programs and increased uncertainty regarding North Korea's actions and possible responses from the international community.

Although we do not derive any revenue from, nor sell any products in, North Korea, any further increase in tensions between South Korea and North Korea that may occur, for example, if North Korea experiences a leadership crisis, high-level contacts between South Korea and North Korea break down, or military hostilities occur, could have a material adverse effect on the South Korea economy and on our South Korea subsidiary, our business, financial condition, results of operations and the market value of our common stock.

Any attempt by the U.S. government to withdraw from or materially modify existing international trade agreements could adversely affect our business, financial condition and results of operations.

The United States is undergoing major political changes, which has created uncertainty regarding future U.S. trade policies. President Trump has made comments suggesting that he is not supportive of certain existing international trade agreements, such as the North America Free Trade Agreement. Shortly after his inauguration, President Trump signed executive orders to withdraw the U.S. from the Trans-Pacific Partnership. At this time, it remains unclear what actions, if any, President Trump will take with respect to other existing international trade agreements. If the United States were to withdraw from or materially modify certain international trade agreements to which it is a party, or if tariffs were raised on foreign-sourced goods imported to the U.S., our U.S. customers may seek new suppliers in the U.S. or other countries, and our business, financial condition and results of operations could be adversely affected.

A cybersecurity breach could interfere with our business operations, compromise confidential information, result in adverse impact to our reputation and operating results and potentially lead to litigation and other liabilities.

Cybersecurity threats continue to expand and evolve globally. While we actively manage information technology security risks, there can be no assurance that such actions will be sufficient to mitigate all potential risks to our system, networks and data.

A failure or breach in security could expose us and our customers, dealers and suppliers to risks of unauthorized access to information technology systems, misuse and compromise of confidential information, manipulation and destruction of data, which could potentially result in disruption of our business operations and adversely affect our reputation, competitive position, financial condition and results of operations. Security breaches could also result in litigation with third parties, regulatory actions and higher costs of implementing additional data protection measures.

### **Risks Relating to Ownership of Our Common Shares and the ADSs**

The market for our common shares and the ADSs may not be liquid.

Active, liquid trading markets generally result in lower price volatility and more efficient execution of buy and sell orders for investors, compared to less active and less liquid markets. Liquidity of a securities market is often a function of the volume of the underlying shares that are publicly held by unrelated parties.

There has been no trading market outside the ROC for our common shares and the only trading market for our common shares is the TWSE. The outstanding ADSs are listed on the NYSE. There is no assurance that the market for our common shares or the ADSs will be active or liquid.

Although ADS holders are entitled to withdraw our common shares underlying the ADSs from the depositary at any time, ROC law requires that our common shares be held in an account in the ROC or sold for the benefit of the holder on the TWSE. In connection with any withdrawal of common shares from our ADS facility, the ADSs evidencing these common shares will be cancelled. Unless additional ADSs are issued, the effect of withdrawals will be to reduce the number of outstanding ADSs. If a significant number of withdrawals are effected, the liquidity of our ADSs will be substantially reduced. We cannot assure you that the ADS depositary will be able to arrange for a sale of deposited shares in a timely manner or at a specified price, particularly during periods of illiquidity or volatility.

Table of Contents

The ongoing proceeding involving Dr. Tien Wu may have an adverse impact on our business and cause our common shares and ADS price to decline.

Dr. Tien Wu, ASE's director and Chief Operating Officer, is currently undergoing a criminal proceeding brought by the Kaohsiung Prosecutor's Office. The indictment alleges that Dr. Tien Wu violated Article 157-1 of the ROC Securities and Exchange Act for insider trading activities involving SPIL common shares conducted during the period when the Initial SPIL Tender Offers, the Second SPIL Tender Offers and negotiations of the memorandum of understanding in relation to SPIL Acquisition took place. Dr. Tien Wu is accused of tipping off a friend about the aforementioned tender offers and negotiation ahead of the public announcements. No judicial conclusion has been reached yet for this proceeding. Further development of this proceeding may result in regulatory scrutiny from the TWSE or other regulators on a discretionary basis. If Dr. Tien Wu is sentenced due to the alleged violations, investor confidence in our company could be impaired and our business capacity to retain or attract clients could be negatively affected. Although no ASE directors are expected to become party to any current or future litigation related to Dr. Tien Wu, there is no assurance that there will not be similar or related litigation in the future.

On February 2, 2018, the ROC Securities and Futures Investors Protection Center filed a civil lawsuit against Dr. Tien Wu and ASE, requesting the court to remove him from ASE's board based on Article 10-1 of the Securities Investor and Futures Trader Protection Act. There is no assurance that this proceeding or the further scrutiny from regulators will not generate publicity or media attention. Any negative publicity in connection to this legal proceeding may adversely affect ASE's brand and reputation and result in a material adverse impact on their business operations and prospects. As ASE depends on the continued service of its executive officers and is not insured against the loss of service of any of their personnel, ASE's business operations could suffer if it loses the service of any executive officers, including Dr. Tien Wu, and cannot adequately replace them.

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

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

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

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

Table of Contents

The market value of your investment may fluctuate due to the volatility of the ROC securities market.

The trading price of our ADSs may be affected by the trading price of our common shares on the TWSE. The ROC securities market is smaller and more volatile than the securities markets in the United States and in many European countries. The TWSE has experienced substantial fluctuations in the prices and volumes of sales of listed securities and there are currently limits on the range of daily price movements on the TWSE. The TWSE Index peaked at 12,495.3 in February 1990, and subsequently fell to a low of 2,560.5 in October 1990. On March 13, 2000, the Taiwan Stock Exchange Index experienced a 617-point drop, which represented the single largest decrease in the Taiwan Stock Exchange Index in its history. During the period from January 1, 2017 to December 31, 2017, the Taiwan Stock Exchange Index peaked at 10,854.57 on November 23, 2017, and reached a low of 9,272.88 on January 3, 2017. Over the same period, the trading price of our common shares ranged from NT\$42.35 per share to NT\$32.60 per share. On March 16, 2018, the Taiwan Stock Exchange Index closed at 11,027.7, and the closing value of our common shares was NT\$41.75 per share.

The TWSE is particularly volatile during times of political instability, including when relations between Taiwan and the PRC are strained. Several investment funds affiliated with the ROC government have also from time to time purchased securities from the TWSE to support the trading level of the TWSE. Moreover, the TWSE has experienced problems such as market manipulation, insider trading and settlement defaults. The recurrence of these or similar problems could have an adverse effect on the market price and liquidity of the securities of ROC companies, including our common shares and ADSs, in both the domestic and international markets.

We may not continue to declare cash dividends in any particular amount.

We intend to continue to pay dividends. However, future dividends may be affected by, among other things, the best interests of our company and our shareholders, our results of operations, cash balances and future cash requirements, financial condition, investments and acquisitions, legal risks, and other factors that the board of directors may consider relevant. Our dividend payments may change from time to time, and we cannot assure that we will continue to declare dividends in any particular amounts. A reduction in, a delay of, or elimination of our dividend payments could adversely affect our share price.

Holders of common shares and ADSs may experience dilution if we issue stock bonuses and stock options to employees or sell additional equity or equity-linked securities.

Similar to other ROC technology companies, we issue bonuses from time to time in the form of common shares. Prior to 2009, bonuses issued in the form of our common shares were valued at par. Beginning in 2009, bonuses in the form of our common shares are valued at the closing price of our common shares on the day prior to our shareholders' meeting. In addition, under the ROC Company Law we may, upon approval from our board of directors and the ROC

Securities and Futures Bureau of the FSC, establish employee stock option plans provided that shareholders' approval is required if the exercise price of an option would be less than the closing price of our common shares on the TWSE on the grant date of the option. ASE Inc. currently maintains two employee stock option plans pursuant to which our full-time employees, including our domestic and foreign subsidiaries, are eligible to receive stock option grants. As of December 31, 2017, 135,961,000 options granted by ASE Inc. were outstanding. Our board of directors and the FSC approved the 5<sup>th</sup> employee share option plans in December 2014 and April 2015, respectively, under which 94,270,000 options were granted in September 2015. See "Item 6. Directors, Senior Management and Employees—Compensation—ASE Inc. Employee Bonus and Stock Option Plans." The issuance of our common shares pursuant to stock bonuses or stock options may have a dilutive effect on the holders of outstanding common shares and ADSs.

In addition, the sale of additional equity or equity-linked securities may result in additional dilution to our shareholders. In September 2013, we issued 2018 Convertible Bonds to fund procurement of raw materials from overseas. The bonds are convertible by holders at any time on or after October 16, 2013 and up to (and including) August 26, 2018. The initial conversion price was NT\$33.085 per common share, subject to adjustment upon the occurrence of certain events, such as the 2013 Capital Increase, the 2017 Capital Increase and cash dividend distribution. Any conversion of bonds, in full or in part, would dilute the ownership interest of our existing shareholders and our earnings per share and could adversely affect the market price of our ADSs. As of the date of this annual report, the bondholders have exercised conversion rights to convert 2018 Convertible Bonds of US\$399.6 million into 424,258,000 common shares at conversion prices ranging from NT\$27.95 (US\$0.9) to NT\$28.96 (US\$1.0) per common share. The converted common shares represented 5% of our outstanding shares as of December 31, 2017. In the third quarter of 2017, the closing price of our common shares (translated into U.S. dollars at the prevailing rates) for a period of 20 consecutive trading days was higher than 130% of the conversion price in U.S. dollar translated at the fixed exchange rate of US\$1 to NT\$29.956 determined on pricing date per common share. As a result, we redeemed the outstanding 2018 Convertible Bonds of US\$0.4 million in September 2017.



Table of Contents

In September 2013, we issued 130,000,000 common shares for public subscription, which was effected by way of an increase in our authorized share capital in the amount of NT\$1,300.0 million. Moreover, in March 2017, we granted rights to the record holders of our existing common shares to subscribe for an aggregate of 240,000,000 of our common shares, par value NT\$10.0 per share (the “Rights Offering”). Substantially concurrently with the Rights Offering, we also offered 30,000,000 of our common shares to our employees (the “Employee Offering”) and offered 30,000,000 of our common shares to the public in Taiwan (the “Taiwan Public Offering”, together with the Rights Offering and the Employee Offering, the “2017 Capital Increase”). The issuance of additional equity or equity-linked securities could cause dilution to our ADS holders.

Restrictions on the ability to deposit our common shares into our ADS facility may adversely affect the liquidity and price of our ADSs.

The ability to deposit common shares into our ADS facility is restricted by ROC law. A significant number of withdrawals of common shares underlying our ADSs would reduce the liquidity of the ADSs by reducing the number of ADSs outstanding. As a result, the prevailing market price of our ADSs may differ from the prevailing market price of our common shares on the TWSE. Under current ROC law, no person or entity, including you and us, may deposit our common shares in our ADS facility without specific approval of the FSC, unless:

- (1) we pay stock dividends on our common shares;
- (2) we make a free distribution of common shares;
- (3) holders of ADSs exercise preemptive rights in the event of capital increases; or

(4) to the extent permitted under the deposit agreement and the relevant custody agreement, investors purchase our common shares, directly or through the depository, on the TWSE, and deliver our common shares to the custodian for deposit into our ADS facility, or our existing shareholders deliver our common shares to the custodian for deposit into our ADS facility.

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

In addition, in the case of a deposit of our common shares requested under item (4) above, the depository will refuse to accept deposit of our common shares if such deposit is not permitted under any legal, regulatory or other restrictions

notified by us to the depositary from time to time, which restrictions may include blackout periods during which deposits may not be made, minimum and maximum amounts and frequency of deposits.

The depositary will not offer holders of ADSs preemptive rights unless the distribution of both the rights and the underlying common shares to our ADS holders are either registered under the Securities Act or exempt from registration under the Securities Act.

Holders of ADSs will not have the same voting rights as our shareholders, which may affect the value of their ADSs.

The voting rights of a holder of ADSs as to our common shares represented by its ADSs are governed by the deposit agreement. Holders of ADSs will not be able to exercise voting rights on an individual basis. If holders representing at least 51% of the ADSs outstanding at the relevant record date instruct the depositary to vote in the same manner regarding a resolution, including the election of directors, the depositary will cause all common shares represented by the ADSs to be voted in that manner. If the depositary does not receive timely instructions representing at least 51% of the ADSs outstanding at the relevant record date to vote in the same manner for any resolution, including the election of directors, holders of ADSs will be deemed to have instructed the depositary or its nominee to authorize all our common shares represented by the ADSs to be voted at the discretion of our chairman or his designee, which may not be in the interest of holders of ADSs. Moreover, while shareholders who own 1% or more of our outstanding shares are entitled to submit one proposal to be considered at our annual general meetings of shareholders, only holders representing at least 51% of our ADSs outstanding at the relevant record date are entitled to submit one proposal to be considered at our annual general meetings of shareholders. Hence, only one proposal may be submitted on behalf of all ADS holders.

Table of Contents

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

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

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

For example, in March 2017, we granted rights to the record holders of our existing common shares to subscribe for an aggregate of 240,000,000 of our common shares (the “New Shares”), while the holders of ADSs were not given rights to subscribe for new ADSs and do not have the right to instruct the depositary to subscribe for the New Shares on their behalf. If a holder of ADSs wants the rights corresponding to the common shares underlying such ADSs to be exercised, such holder needs to surrender the ADSs to the depositary and instruct the depositary to deliver the underlying common shares to a securities brokerage account in Taiwan specified by such holder.

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

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

the proceeds of the sale of common shares represented by ADSs or received as stock dividends from our common shares and deposited into the depositary receipt facility; and

any cash dividends or distributions received from our common shares.

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

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

## Table of Contents

The value of your investment may be reduced by possible future sales of common shares or ADSs by us or our shareholders.

While we are not aware of any plans by any major shareholders to dispose of significant numbers of common shares, we cannot assure you that one or more existing shareholders or owners of securities convertible or exchangeable into or exercisable for our common shares or ADSs will not dispose of significant numbers of common shares or ADSs. In addition, several of our subsidiaries and affiliates hold common shares, depositary shares representing common shares and options to purchase common shares or ADSs. They may decide to sell those securities in the future. See “Item 7. Major Shareholders and Related Party Transactions—Major Shareholders” for a description of our significant shareholders and affiliates that hold our common shares.

We cannot predict the effect, if any, that future sales of common shares or ADSs, or the availability of common shares or ADSs for future sale, will have on the market price of our common shares or the ADSs prevailing from time to time. Sales of substantial numbers of common shares or ADSs in the public market, or the perception that such sales may occur, could depress the prevailing market prices of our common shares or the ADSs.

## Item 4. Information on the Company

### HISTORY AND DEVELOPMENT OF THE COMPANY

Advanced Semiconductor Engineering, Inc. was incorporated on March 23, 1984 as a company limited by shares under the ROC Company Law, with facilities in the Nantze Export Processing Zone located in Kaohsiung, Taiwan. Our principal executive offices are located at 26 Chin Third Road, Nantze Export Processing Zone, Nantze, Kaohsiung, Taiwan, ROC and our telephone number at the above address is (886) 7-361-7131. Our common shares have been listed on the TWSE under the symbol “2311” since July 1989, and ADSs representing our common shares have been listed on the NYSE under the symbol “ASX” since September 2000.

### **Acquisition of Common Shares and American Depositary Shares of SPIL**

In August 2015, we announced an offer to purchase 779,000,000 common shares (including those represented by American depositary shares) of SPIL through concurrent tender offers in the ROC and the U.S., at a price of NT\$45 per SPIL common share and NT\$225 per SPIL American depositary share. The Initial SPIL Tender Offer expired on September 22, 2015, with 1,147,898,165 common shares (including those represented by American depositary shares) validly tendered and not validly withdrawn, exceeding the offer cap, and as a result, after proration, 725,749,060 SPIL common shares and 10,650,188 SPIL American depositary shares were accepted for purchase. On October 1, 2015,

we became a shareholder holding approximately 24.99% of the issued and outstanding share capital in SPIL.

In December 2015, following an announcement by SPIL that it plans to issue 1,033 million shares, if approved by SPIL shareholders, to a third party pursuant to a share placement agreement, we submitted a written proposal to SPIL's Board proposing to acquire all SPIL shares not otherwise owned by ASE, contingent upon the termination of the share placement agreement. The board of directors of SPIL did not respond to our acquisition proposal. Subsequently, we launched an offer to purchase 770,000,000 common shares (including those represented by American depositary shares) of SPIL through concurrent tender offers in the ROC and the U.S., at a price of NT\$55 per SPIL common share and NT\$275 per SPIL American depositary share. The Second SPIL Tender Offer expired on March 17, 2016. Because the TFTC did not render a decision before the expiration of the Second SPIL Tender Offer, resulting in the failure to satisfy one of the tender offer conditions, the Second SPIL Tender Offer was not successful. The TFTC subsequently suspended its review on March 23, 2016.

Notwithstanding the failure of the Second SPIL Tender Offer, we continued to seek control of SPIL, with the purpose of effecting an acquisition of 100% of the common shares and American depositary shares of SPIL. Simultaneously with the acquisition of SPIL, we planned to establish a holding company in Taiwan that would hold 100% of the equity interests of both ASE and SPIL such that ASE and SPIL would be wholly owned subsidiaries of such holding company, which would maintain all current operations of ASE and SPIL in Taiwan.

## Table of Contents

In March and April 2016, we acquired an additional 258,300,000 common shares of SPIL (including those represented by American depositary shares) through open market purchases.

In June 2016, we entered into the Joint Share Exchange Agreement with SPIL, pursuant to which a holding company, ASE Holding will be formed by means of a statutory share exchange pursuant to the laws of the Republic of China, and ASE Holding will (i) acquire all issued shares of ASE in exchange for shares of ASE Holding, and (ii) acquire all issued shares of SPIL using cash consideration (the “Share Exchange”). Upon the consummation of the Share Exchange, ASE and SPIL will become privately held and wholly owned subsidiaries of ASE Holding concurrently. Subject to the Share Exchange, the Joint Share Exchange Agreement and the other transactions contemplated thereby being approved by shareholders of ASE and SPIL, and upon the satisfaction of the other conditions for completing the Share Exchange, ASE Holding will be formed. The common shares of ASE will be delisted from the TWSE and the ADSs will be delisted from NYSE and will become eligible for deregistration under the Exchange Act. The common shares of ASE Holding will be listed on the TWSE and begin trading in Taiwan during TWSE trading hours on the effective date of the Share Exchange (the “Effective Date”), and the ADSs of ASE Holding will be listed on the NYSE and begin trading in the U.S. during NYSE trading hours on the Effective Date.

Since the description of the attributes of common shares in the share capital provisions of the Articles of Incorporation of ASE and ASE Holding will be substantially similar, there are no material differences between the rights of holders of the common shares of ASE and ASE Holding from a legal perspective. However, the common shares and ADSs of ASE will be suspended from trading on the TWSE and NYSE, respectively, starting from the eighth ROC Trading Day before the Effective Date. The holders of the common shares and ADSs of ASE will not be able to trade those shares or ADSs, or the common shares and ADSs of ASE Holding they will be entitled to receive from the date of such suspension to the Effective Date. Accordingly, these holders will be subject to the risk of not being able to liquidate their shares during this trading gap period.

On January 16, 2018, we converted 9,690,452 American depositary shares of SPIL we owned into 48,452,260 common shares. As of January 31, 2018, SPIL had an aggregate of 3,116,361,139 common shares, including 188,916,960 common shares represented by American depositary shares, issued and outstanding, and we beneficially owned 1,037,300,000 common shares of SPIL. There were no public takeover offers by third parties of ASE’s shares which occurred in 2016.

## **USI Group Restructuring**

In April 2015, our subsidiary Universal Scientific completed a spin-off of its subsidiaries to USI Inc. As a result of such spin-off, as of April 1, 2015, ASE Inc. held approximately 99.01% of Universal Scientific and approximately 99.17% of USI Inc.

Universal Scientific, USI Inc. and USI Inc.'s directly and indirectly held subsidiaries (collectively, the "USI Group") primarily engage in electronic manufacturing services in relation to computers, consumer electronics, communications, industrial and automotive, among other services and businesses. As part of our corporate reorganization to align each business function to different legal entity groups, the board of directors of ASE Inc. passed a resolution on September 24, 2015 and approved the sale of all ASE Inc.'s shareholding in Universal Scientific to UGTW, an indirectly held subsidiary of USI Inc., which will result in USI Inc. indirectly holding Universal Scientific (the "Universal Scientific Share Transfer"). The Universal Scientific Share Transfer was approved by the Investment Commission of MOEA on February 3, 2016. The majority of ASE Inc.'s shares in Universal Scientific were transferred to UGTW in March 2016, and the remaining shares were transferred in May 2016.

## Capital Expenditures

Our principal capital expenditures for the years ended December 31, 2015, 2016 and 2017 have been for machinery and equipment procurements and investments in buildings and improvement in connection with the expansion of our capacity expansion, for which we spent NT\$28,280.8 million, NT\$27,680.9 million and NT\$23,677.7 million (US\$798.8 million), respectively. We had commitments for capital expenditures of approximately NT\$7,019.4 million (US\$236.8 million), of which NT\$294.2 million (US\$9.9 million) had been paid as of December 31, 2017, mainly in connection with the expansion of our packaging and testing services operations primarily in the ROC and the PRC. Any future expansion of our operating activities could result in additional capital expenditures. We anticipate our capital expenditures in 2018 will be financed through our existing cash, marketable securities, expected cash flow from operations and existing credit lines under our loan facilities and will consist of, among other things, additional machinery and equipment procurements for our capacity expansions. See "Item 5. Operating and Financial Review and Prospects—Liquidity and Capital Resources" for more information. Other than the acquisition of common shares and American depositary shares of SPIL by way of the Initial SPIL Tender Offer, the Share Exchange and through open market purchases, there were no significant financial investments or divestitures in 2015, 2016 and 2017. See "Item 4. Information on the Company—History and Development of the Company—Acquisition of Common Shares and American Depositary Shares of SPIL" for information.



Table of Contents

For more information on our history and development, see “—Organizational Structure.”

**BUSINESS OVERVIEW**

ASE is among the world’s leading companies in semiconductor packaging and testing sector. Our services include semiconductor packaging, production of interconnect materials, front-end engineering testing, wafer probing and final testing services, as well as integrated solutions for electronic manufacturing services in relation to computers, peripherals, communications, industrial, automotive, and storage and server applications. We believe that, as a result of the following strengths, we are able to compete effectively to meet customers’ requirements across a wide range of end-use applications:

- our ability to provide a broad range of cost-effective semiconductor packaging and testing services on a large-scale turnkey basis within key centers of semiconductor manufacturing;

- our expertise in developing and providing cost-effective packaging, interconnect materials and testing technologies and solutions;

- our ability to provide proactive original design manufacturing services using innovative solution-based designs;

  - our commitment to investing in capacity expansion and research and development, as well as selective acquisitions, that will benefit customers and our business;

  - our geographic presence in key centers of outsourced semiconductor and electronics manufacturing; and

- our long-term relationships with providers of complementary semiconductor manufacturing services, including our strategic alliance with TSMC, one of the world’s largest dedicated semiconductor foundries.

We believe that it is still the trend for semiconductor companies to outsource their packaging, testing and manufacturing requirements as semiconductor companies rely on independent providers of foundry, packaging and testing and electronic manufacturing services. In response to the increased pace of new product development and shortened product life and production cycles, semiconductor companies are increasingly seeking both independent packaging and testing companies that can provide turnkey services in order to reduce time-to-market and electronic manufacturing companies with proactive original design capabilities that can provide large-scale production. We believe that our technological expertise and scale and our ability to integrate our broad range of solutions into turnkey services and electronic manufacturing services allow us to benefit from the accelerated outsourcing trend and better

serve our existing and potential customers.

We believe that we have benefited, and will continue to benefit, from our geographic location in Taiwan. Taiwan is currently the largest center for outsourced semiconductor manufacturing in the world and has a high concentration of electronic manufacturing service providers. Our close proximity to foundries and other providers of complementary semiconductor manufacturing services is attractive to our customers who wish to take advantage of the efficiencies of a total semiconductor manufacturing solution by outsourcing several stages of their manufacturing requirements. We believe that, as a result, we are well positioned to meet the advanced semiconductor engineering and manufacturing requirements of our customers.

## Table of Contents

### Industry Background

#### General

Semiconductors are the basic building blocks used to create an increasing variety of electronic products and systems. Continuous improvements in semiconductor process and design technologies have led to smaller, more complex and more reliable semiconductors at a lower cost per function. These improvements have resulted in significant performance and price benefits to manufacturers of electronic products. As a result, semiconductor demand has grown substantially in our primary end-user markets for communications, computing and consumer electronics, and has experienced increased growth in other markets such as automotive products and industrial automation and control systems.

The semiconductor industry is characterized by strong long-term growth, with periodic and sometimes severe cyclical downturns. The Semiconductor Industry Association reported that worldwide sales of semiconductors increased from approximately US\$51.0 billion in 1990 to approximately US\$412.2 billion in 2017. We believe that overall growth and cyclical fluctuations will continue over the long-term in the semiconductor industry.

#### Electronic Manufacturing Services

Electronic manufacturing service providers typically achieve large economies of scale in manufacturing by pooling together product design techniques and also provide value-added services such as warranties and repairs. Companies who do not need to manufacture a constant supply of products have increasingly outsourced their manufacturing to these service providers so that they can respond quickly and efficiently to sudden spikes in demand without having to maintain large inventories of products.

Electronic manufacturing services are sought by companies in a wide range of industries including, among others, information, communications, consumer electronics, automotive electronics, medical treatment, industrial applications, aviation, navigation, national defense and transportation. Although affected by global economic fluctuations, we expect the electronic manufacturing services industry to continue to grow in the long-term, and we have enhanced our presence in the industry since 2010 through our acquisition of a controlling interest in Universal Scientific.

#### Outsourcing Trends in Semiconductor Manufacturing

Historically, semiconductor companies designed, manufactured, packaged and tested semiconductors primarily within their own facilities. However, there is a clear trend in the industry to outsource the manufacturing process. Virtually every significant stage of the manufacturing process can be outsourced. Wafer foundry services, semiconductor packaging and testing services, and electronic manufacturing services are currently the largest segments of the independent semiconductor manufacturing services market.

The availability of technologically advanced independent manufacturing services has also enabled the growth of “fabless” semiconductor companies that focus on semiconductor design and marketing, while outsourcing their wafer fabrication, packaging and testing requirements to independent companies. We believe that the growth in the number and scale of fabless semiconductor companies that rely solely on independent companies to meet their manufacturing requirements will continue to be a driver of growth for us. Similarly, the availability of technologically advanced independent manufacturing services has encouraged integrated device manufacturers, which traditionally have relied on in-house semiconductor manufacturing capacity, to increasingly outsource their manufacturing requirements to independent semiconductor manufacturing companies.

We believe the outsourcing of semiconductor manufacturing services will increase in the future for many reasons, including the following:

*Technological Expertise and Significant Capital Expenditure.* Semiconductor manufacturing 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 continuously upgrade or replace manufacturing equipment to accommodate new products. As a result, new investments in in-house facilities are becoming less desirable to integrated device manufacturers because of the high investment costs as well as the inability to achieve sufficient economies of scale and utilization rates necessary to be competitive with the independent service providers. Independent packaging, testing, wafer foundry and electronic manufacturing services 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. In the process, they are also able to focus on discrete stages of semiconductor manufacturing and deliver services of superior quality.

## Table of Contents

Some semiconductor companies with in-house operations are under increasing pressure to rationalize these operations by relocating to locations with lower costs or better infrastructure, in order to lower manufacturing costs and shorten production cycle time. We expect semiconductor companies to increasingly outsource their requirements to take advantage of the advanced technology and scale of operations of independent packaging and testing companies and electronic manufacturing services providers.

*Focus on Core Competencies.* As the semiconductor industry becomes more competitive, semiconductor companies are expected to further outsource their semiconductor manufacturing requirements in order to focus their resources on core competencies, such as semiconductor design and marketing.

*Time-to-Market Pressure.* The increasingly short product life cycle has accelerated time-to-market pressure for semiconductor companies, leading them to rely increasingly on outsourced suppliers as a key source for effective manufacturing solutions.

*Capitalize on the High Growth Rates in Emerging Markets.* Emerging markets, and China in particular, have become both major manufacturing centers for the technology industry and growing markets for technology-based products. Thus, in order to gain direct access to the Chinese market, many semiconductor companies are seeking to establish manufacturing facilities in China by partnering with local subcontractors. As a result, certain stages of the semiconductor manufacturing process that were previously handled in-house will be increasingly outsourced in order to improve efficiency.

## Trends of Mergers and Acquisitions in the Semiconductor Industry

The global semiconductor industry is highly competitive, and such competitive landscape is changing as a result of a trend toward consolidation within the industry. In particular, packaging and testing service providers in the semiconductor industry have engaged in cross-border mergers and acquisitions in recent years as part of their expansion strategy, which has gradually changed the ecosystem of the semiconductor industry. Examples of mergers and acquisitions in recent years include mergers and acquisitions by and among semiconductor design companies or integrated device manufacturers, including Intel Corporation's acquisition of Altera Corporation, ON Semiconductor Corporation's acquisition of Fairchild Semiconductor International, Inc., NXP Semiconductors N.V.'s acquisition of Freescale Semiconductor, Inc., Avago Technologies Ltd.'s acquisition of Broadcom Corporation and several acquisitions of semiconductor design companies by MediaTek, Inc., and mergers and acquisitions by and among semiconductor packaging and testing companies, including Jiangsu Changjiang Electronics Technology Co., Ltd.'s acquisition of STATS ChipPAC Ltd., Nantong Fujitsu Microelectronics Co., Ltd.'s acquisition of the packaging and testing factory of Advanced Micro Devices, Inc. and Amkor Technology, Inc.'s acquisition of J-Devices Corporation.

As a result of the aforementioned mergers and acquisitions, our competitors were able to further strengthen their competitive position by expanding their product offerings and combining their financial resources. We expect this

consolidation trend to continue in 2018.

#### Overview of Semiconductor Manufacturing Process

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

Table of Contents

37

Table of Contents

We are involved in all stages of the semiconductor manufacturing process except circuit design and wafer fabrication.

<b>Process</b>	<b>Description</b>
1. Circuit Design	The design of a semiconductor is developed by laying out circuit components and interconnections.
2. Engineering Test	Throughout and following the design process, prototype semiconductors undergo engineering testing, which involves software development, electrical design validation and reliability and failure analysis.
3. Wafer Fabrication	Process begins with the generation of a photomask through the definition of the circuit design pattern on a photographic negative, known as a mask, by an electron beam or laser beam writer. These circuit patterns are transferred to the wafers using various advanced processes.
4. Wafer Probe	Each individual die is electrically tested, or probed, for defects. Dies that fail this test are marked to be discarded.
5. Packaging (or Assembly)	<p>Packaging, also called assembly, is the processing of bare semiconductors into finished semiconductors and serves to protect the die and facilitate electrical connections and heat dissipation. The patterned silicon wafers received from our customers are diced by means of diamond saws into separate dies, also called chips. Basically each die is attached to a leadframe or a laminate (plastic or tape) substrate by epoxy resin. A leadframe is a miniature sheet of metal, generally made of copper and silver alloys, on which the pattern of input/output leads has been cut. On a laminate substrate, typically used in ball grid array, or BGA, packages, the leads take the shape of small bumps or balls. Leads on the leadframe or the substrate are connected by extremely fine gold or copper wires or bumps to the input/output terminals on the chips, through the use of automated machines known as “bonders.” Each chip is then encapsulated, generally in a plastic casing molded from a molding compound, with only the leads protruding from the finished casing, either from the edges of the package as in the case of the leadframe-based packages, or in the form of small bumps on a surface of the package as in the case of BGA or other substrate-based packages.</p> <p>Final testing is conducted to ensure that the packaged semiconductor meets performance specifications. Final testing involves using sophisticated testing equipment known as testers and customized software to electrically test a number of attributes of packaged semiconductors, including functionality, speed, predicted endurance and power consumption. The final testing of semiconductors is categorized by the functions of the semiconductors tested into logic/mixed-signal/RF/3D IC/discrete final testing and memory final testing. Memory final testing typically requires simpler test software but longer testing time per device tested.</p>
6. Final Test	
7. Module, Board Assembly and Test	Module, board assembly and test refers to the combination of one or more packaged semiconductors with other components in an integrated module or board to enable increased functionality.
8. Material	Material refers to the interconnection of materials which connect the input/output on the semiconductor dies to the printed circuit board, such as substrate, leadframe and flip-chip.





## Table of Contents

### **Strategy**

Our objective is to provide integrated solutions that set industry standards, including packaging, testing services, interconnect materials design and production capabilities, and to lead and facilitate the industry trend toward outsourcing semiconductor manufacturing requirements. The principal elements of our strategy are to:

#### Grow Our Packaging Services and Expand Our Range of Offerings

We believe that an important factor to attract leading semiconductor companies as our customers has been our ability to fulfill demand for a broad range of packaging solutions on a large scale. We intend to continue to develop process and product technologies to meet the packaging requirements of clients. Our expertise in packaging technology has enabled us to develop sophisticated solutions such as flip-chip packaging, bump chip carrier packaging, stacked die packaging and fine-pitch wire bonding. We are continuously investing in research and development in response to and in anticipation of migrations in technology and intend to continue to acquire access to new technologies through strategic alliances and licensing arrangements.

The increasing miniaturization of semiconductors and the growing complexity of interconnect technology have also resulted in the convergence of assembly processes at different levels of integration: chip, module, board and system. In response to this miniaturization and growing complexity, we have focused on providing module assembly services and, in addition, our subsidiary Universal Scientific has provided us with access to process and product technologies at the levels of module, board and system assembly and testing, which helps us to better anticipate industry trends and take advantage of potential growth opportunities. We expect to continue to combine our packaging, testing and materials technologies with the expertise of Universal Scientific at the systems level to develop our SiP business.

#### Strategically Expand and Streamline Production Capacity

To capitalize on the growing demand for packaging and testing services, we intend to strategically expand our production capacity, both through internal growth and selective acquisitions and joint ventures, with a focus on providing cost competitive and innovative packaging and testing services.

We intend to invest in trends that are essential to the development of the industry. We plan to expand our capacity with respect to, but not limited to, 12-inch wafer process, bumping, FC-CSP and SiP products to meet demand for smaller form factors, higher performance and higher packaging density.

In addition, we intend to promote our copper wire solutions to our customers in addition to gold wire. Gold wire is a significant raw material for us. Gold prices, however, are subject to intense fluctuations and have in the past impacted our profitability. We believe that replacing gold wire in some of our packages with copper wire technology will not only improve our profitability but will also enable us to provide more value to our customers by providing lower cost solutions, which could enhance our competitiveness and market share. We are currently the industry leader in terms of copper wire capacity. We thus plan to capitalize on the overall industry trend of copper conversion by maintaining our leadership and focusing on integrating copper wire into a wider range of traditional leadframe-based packages and higher end substrate-based packages.

We expect to focus our packaging and testing on providing cost competitive services through better management of capacity utilization and efficiency improvements and offer our services on a large scale with the intention of driving more integrated device manufacturer outsourcing in the long-run.

We evaluate acquisition and joint venture opportunities on the basis of access to new markets and technology, the enhancement of our production capacity, improvement of research and development capabilities, economies of scale and management resources, and closer proximity to existing and potential customers. For example, we acquired controlling interests in Universal Scientific in 2010 to broaden our offerings to include integrated solutions for electronic manufacturing services in relation to computers, peripherals, communications, industrial, automotive, and storage and server applications. In May 2015, we entered into a joint venture agreement with TDK Corporation to invest in ASEEE to further expand our business in embedded substrates. We acquired 779,000,000 common shares (including common shares represented by American depositary shares) of SPIL through the Initial SPIL Tender Offer in September 2015 and additional 258,300,000 common shares of SPIL (including those represented by American depositary shares) in March and April 2016 through open market purchases. We entered into the Joint Share Exchange Agreement with SPIL in June 2016, and upon the consummation of the Share Exchange, which is subject to shareholders' approval of both companies and the satisfaction of other conditions, ASE and SPIL will become wholly owned subsidiaries of ASE Holding concurrently. Furthermore, we entered into a joint venture agreement with Qualcomm Incorporated in February 2018 to expand our SiP business.

Table of Contents

Continue to Leverage Our Presence in Key Centers of Semiconductor and Electronics Manufacturing

We intend to continue leveraging our presence in key centers of semiconductor and electronics manufacturing to further grow our business. We have significant packaging, testing and electronic manufacturing services operations in Taiwan, currently one of the leading centers for outsourced semiconductor and electronics manufacturing in the world. This presence enables our engineers to work closely with our customers as well as wafer foundries and other providers of complementary semiconductor and electronic manufacturing services early in the design process, enhances our responsiveness to the requirements of our customers and shortens production cycles. In addition, as a turnkey service provider, we are able to offer our products to our customers and complementary service providers within relatively close geographic proximity. Besides our current operations in Taiwan, we intend to expand our operations in our other subsidiaries.

We have primary operations in the following locations besides our locations in Taiwan:

- PRC — a fast-growing market for semiconductor and electronics manufacturing in the world;
- Korea — an important center for the manufacturing of memory and communications devices;
- Malaysia and Singapore — a center for outsourced semiconductor manufacturing in Southeast Asia;

· Silicon Valley in California — the preeminent center for semiconductor design, with a concentration of fabless customers; and

· Japan — an emerging market for packaging and testing outsourcing services as Japanese integrated device manufacturers increasingly outsource their semiconductor manufacturing requirements.

Strengthen and Develop Strategic Relationships with Our Customers and Providers of Complementary Semiconductor Manufacturing Services

We intend to strengthen existing and develop new strategic relationships with our customers and providers of other complementary semiconductor manufacturing services, such as wafer foundries, as well as equipment vendors, raw material suppliers and technology research institutes, in order to offer our customers total semiconductor manufacturing solutions covering all stages of the manufacturing of their products from design to shipment. In addition, we are working with our customers to co-develop new packaging technologies and designs.

Since 1997, we have maintained a strategic alliance with TSMC, currently one of the world's largest dedicated semiconductor foundries, which designates us as their non-exclusive preferred provider of packaging and testing services for semiconductors manufactured by TSMC. Through our strategic alliance with and close geographic proximity to TSMC, we are able to offer our customers a total semiconductor manufacturing solution that includes access to foundry services in addition to our packaging, testing and direct shipment services.

#### Principal Products and Services

We offer a broad range of semiconductor packaging and testing services. In addition, we have provided electronic manufacturing services since our acquisition of a controlling interest in Universal Scientific in February 2010. Our package types generally employ either leadframes or substrates as interconnect materials. The semiconductors we package are used in a wide range of end-use applications, including communications, computing, consumer electronics, industrial, automotive and other applications. Our testing services include front-end engineering testing, which is performed during and following the initial circuit design stage of the semiconductor manufacturing process, wafer probe, final testing and other related semiconductor testing services. We focus on packaging and testing semiconductors. We offer our customers turnkey services, which consist of packaging, testing and direct shipment of semiconductors to end users designated by our customers. Our electronic manufacturing services are used in a wide range of end-use applications, including, but not limited to, computers, peripherals, communications, industrial applications, automotive electronics, and storage and server applications. In 2017, our revenues generated from packaging, testing and electronic manufacturing services accounted for 43.5%, 9.0% and 46.1% of our operating revenues, respectively.

## Table of Contents

### Packaging Services

We offer a broad range of package types to meet the requirements of our customers, including flip-chip BGA, flip-chip CSP, aCSP (advanced chip scale packages), quad flat packages (QFP), thin quad flat packages (TQFP), bump chip carrier (BCC), quad flat no-lead (QFN) packages, aQFN (advanced QFN) and Plastic BGA. In addition, we provide 3D chip packages, such as MAP POP (package on package), aMAP POP (advanced, laser ablation type), which enable our customers to mount packages more easily, and HB PoP (High-Band package on Package) for higher performance orientation and marketing requirement. We also offer other forms of stacked die solutions in different package types, e.g., stacked die QFN, hybrid BGAs containing stacked wire bond and FC die. Meanwhile, we are developing the cost-effective solutions to 3D packages, such 2.1D (substrate layer modification) and 2.5D (substrate interposer) to fulfill current low cost and high performance requirement in parallel with 3D packages with TSV (Through Silicon Via) technology. Our first product has been a CMOS image sensor with TSV to minimize the form factor. In addition, to meet current trends toward low cost solutions, we provide copper wire bonding solutions which can be applied to current gold wire products. We also provide high volume manufacturing experience with silver wire bonding for FCCSP Hybrid packages. Furthermore, we are one of the key providers of IoT (Internet of Things), server and automotive services. We believe we are among the leaders in such packaging processes and technologies and are well positioned to lead the technology migration in the semiconductor packaging industry.

We have also been engaging in the production of module-based solutions, including Wi-Fi modules and RF modules, for a number of years. We provide customized module services with SiP solutions to meet customer needs and complex marketing requirements.

**Advanced Packages.** The semiconductor packaging industry has evolved to meet the requirements of high-performance electronics products. We believe that there will continue to be growing demand for packaging solutions with increased input/output density, smaller size and better heat dissipation characteristic.

We have focused on developing our capabilities in certain packaging solutions, such as aCSP (wafer-level chip scale package), flip-chip BGA, Heat-Spreader FCBGA, flip-chip CSP, Hybrid FCCSP (Flip-Chip + W/B), Flip-Chip PiP (Package in Package), Flip-Chip PoP (Package on Package), aS 3™ (Advanced Single Sided Substrate), HB POP (High-Bandwidth POP), Fan-Out Wafer Level Packaging, SESUB and 2.5D. Flip-chip BGA technology replaces wire bonding with wafer bumping for interconnections within the package. Wafer bumping involves the placing of tiny solder balls, instead of wires, on top of dies for connection to substrates. As compared with more traditional packages, which allow input/output connection only on the boundaries of the dies, flip-chip or wafer-level package solutions significantly enhance the input/output flow by allowing input/output connections over the entire surface of the dies.

Chip scale packages typically have an area no greater than 120% of the silicon die. For wafer level package, the electrical connections are plated or printed directly onto the wafer itself, resulting in a package very close to the size

of the silicon die. Wafer-level packages do not include an interposer so they are unlike substrate-based packages, where the die is usually mounted on an interposer which contains electrical connections in the form of small bumps or balls.

aEASI (Advance Embedded Assembly Substrate Integration) is a technology which allows the embedding thin chips into substrate build-up layers. aEASI can be used in various technologies tailored to clients' demand, such as package solution of miniaturization, and has also been proven to have better electrical/thermal performance. It also provides flexibility in design (such as for MicroSiP) and the electrical contacts to the chips are realized by laser-drilled and metallized micro-vias to replace traditional wire bonding process. aEASI are mainly used in power management applications.

Table of Contents

WL MEMs (Wafer-Level MEMs) is advanced assembly for MEMs in wafer-level type instead of current LGA or leadframe types and to use TSV or chip to wafer technology. WL MEMs are mainly used in applications such as pressure, temperature, humidity and gyroscope sensors, among others.

FOWLP (Fan-Out Wafer-Level Packages) provides an extended solution and package type to integrate different functional chips or packages and to have good reduction in resistance and inductance over FCCSP, better thermal performance and smaller form factors of packages. FOWLP can be applied for different stack and SiP solutions.

We provide numerous technologies to meet various customer demands. The following table sets forth our principal advanced packages.

Package Types	Number of Leads	Description	End-Use Applications
Wafer Level Chip Scale Package (aCSP)	6-120	A wafer level chip scale package that can be directly attached to the circuit board. Provides shortest electrical path from the die pad to the circuit board, thereby enhancing electrical performance.	Cellular phones, personal digital assistants, watches, MP3 players, digital cameras and camcorders.
Flip-Chip Chip Scale Package (FC-CSP, a-fcCSP)	16-770	A lightweight package with a small, thin profile that provides better protection for chips and better solder joint reliability than other comparable package types.	RFICs and memory ICs such as digital cameras, DVDs, devices that utilize WiMAX technology, cellular phones, GPS devices and personal computer peripherals.
Flip-Chip PiP (Package in Package) (FC-CSP PiP)	500-980	System In Package for Flip-Chip+Memory die inside with a better electrical performance package types.	Application processor for smartphone, data modern on portable devices.
Flip-Chip PoP (Package on Package) (FC-CSP PoP)	500-1100	SOC (System On Chip) die for Assembly to Bottom package and then applied for Memory die on top inside with a better electrical performance package types.	High-tier application processor for smartphone, data modern on portable devices.
	16-2916		



Flip-Chip BGA/ HF  
FCBGA(High  
Performance / Heat  
Spreader / FCBGA)

Using advanced interconnect technology, the flip-chip BGA packages allow higher density of input/output connection over the entire surface of the dies. HF FCBGA is designed for semiconductor high-performance requirement of high density of interconnects.

High-performance networking, graphics and server and data center processor applications.

Table of Contents

<b>Package Types</b>	<b>Number of Leads</b>	<b>Description</b>	<b>End-Use Applications</b>
Hybrid (Flip-Chip and Wire Bonding)	49-608	A package technology that stacks a die on top of a probed good die to integrate ASIC and memory (flash, SRAM and DDR) into one package and interconnects them with wire bonding and molding. This technology suffers from known good die issues (i.e., one bad die will ruin the entire module). Rework is also not an option in hybrid packages.	Digital cameras, smartphones, bluetooth applications and personal digital assistants.
aS3	up to 300	Ultra-thin profile package which is excellent on middle pin count alternative solution; standard BT material and manufacturing equipment; and lower cost via on pad.	High I/O and short wire length package solution in high performance requirement.
Integrated Passive Device (IPD)	~ 20	IPD can provide high performance/high Q-factor inductor and single/double layers for lower cost and turnkey solutions and integrate passives into one IPD chip. IPD requires less involvement in the Surface Mount Technology ("SMT") process, and is considered to be more compatible with current assembly process and suitable for all package solutions.	Cellular phones, Wi-Fi module, TV and personal digital assistants.
HB (High-Bandwidth)	~ 1000	High-Bandwidth POP can provide a data rate and good signal integrity for Cellular AP, a integration solution for ASIC and Memory, decoupling function for multiple memory mount applications.	Cellular phones and application processors.
POP (Package On Package)	~ 256L Memory		
FOWLP (Fan-out Wafer-Level Package)	~ 1,500+	FOWLP provides an extended solution/package type to integrate most different functional chips or packages and to have good reduction in resistance & inductance over FCCSP, better thermal performance and smaller form factors of packages, and can be applied for different stack or SiP solutions.	Cellular phones, logic devices, power management, RF, Codec, IoT, wearables and networking.

**IC Wirebonding.** We provide IC wirebonding, including leadframe-based packages and substrate-based packages. Leadframe-based packages are packaged by connecting the die, using wire bonders, to the leadframe with gold wire or copper wire. As packaging technology improves, the number of leads per package increases. In addition, improvements in leadframe-based packages have reduced the footprint of the package on the circuit board and improved the electrical performance of the package. To have higher interconnected density and better electrical performance, semiconductor packages have evolved from leadframe-based packages to substrate-based packages. The key differences of these package types are: the size of the package; the density of electrical connections the package can support; flexibility at lower costs; the thermal and electrical characteristics of the package; and environmentally conscious designs. Substrate-based packages generally employ the BGA design. Whereas traditional leadframe technology places the electrical connection around the perimeter of the package, the BGA package type places the electrical connection at the bottom of the package surface in the form of small bumps or balls. These small bumps or balls are typically distributed evenly across the bottom surface of the package, allowing greater distance between individual leads and higher pin-counts. Our expertise in BGA packages also includes capabilities in stacked-die BGA, which assembles multiple dies into a single package.

Table of Contents

3D packaging has recently gained a lot of publicity because of the advent of TSV (Through Silicon Via) based chip stacking. Chip stacking has been implemented for many years, albeit without TSVs. Wire bond die is routinely stacked on leadframes as well as BGA substrates. A more recent implementation is the stacking of packages as package on package (PoP) and the more specialized package in package (PiP). ASE has advanced PoP by the invention of aMAPPoP which provides the package interconnects by exposing a molded in solder ball with a laser via. Aside from being cost effective due to block molding, this PoP also has much lower warpage, greatly improving the stacking yield.

The following table sets forth our principal IC wirebonding packages.

<b>Package Types</b>	<b>Number of Leads</b>	<b>Description</b>	<b>End-Use Applications</b>
Advanced Quad Flat No-Lead Package (aQFN)	104-276	aQFN allows for leadless, multi-row and fine-pitch leadframe packaging and is characterized by enhanced thermal and electrical performance. aQFN is a cost-effective packaging solution due to its cost-effective materials and simpler packaging process.	Telecommunications products, wireless local access networks, personal digital assistants, digital cameras, low to medium lead count packaging information appliances.
Quad Flat Package (QFP)/Thin Quad Flat Package (TQFP)	44-256	Designed for advanced processors and controllers, application-specific integrated circuits and digital signal processors.	Multimedia applications, cellular phones, personal computers, automotive and industrial products, hard disk drives, communication boards such as ethernet, integrated services digital networks and notebook computers.
Quad Flat No-Lead Package (QFN)/ Dual-Row QFN (DR-QFN)/ Microchip Carrier (MCC)	12-160	QFN/DRQFN, also known as types of MCC, uses half-encapsulation technology to expose the rear side of the die pad and the tiny fingers, which are used to connect the chip and bonding wire with printed circuit boards. Dual-Row is to increase the lead counts for product requirement.	Cellular phones, wireless local access networks, personal digital assistant devices and digital cameras.
Bump Chip Carrier (BCC)	16-156	BCC packages use plating metal pads to connect with printed circuit boards, creating enhanced thermal and electrical	Cellular phones, wireless local access networks, personal digital assistant devices and digital cameras.

performance.

Small Outline  
Plastic Package  
(SOP)/Thin Small  
Outline Plastic  
Package (TSOP) 8-56

Designed for memory devices including static random access memory, or SRAM, dynamic random access memory, or DRAM, fast static RAM, also called FSRAM, and flash memory devices.

Consumer audio/video and entertainment products, cordless telephones, pagers, fax machines, printers, copiers, personal computer peripherals, automotive parts, telecommunications products, recordable optical disks and hard disk drives.

Table of Contents

<b>Package Types</b>	<b>Number of Leads</b>	<b>Description</b>	<b>End-Use Applications</b>
Small Outline Plastic J-Bend Package (SOJ)	20-44	Designed for memory and low pin-count applications.	DRAM memory devices, microcontrollers, digital analog conversions and audio/video applications.
Plastic Leaded Chip Carrier (PLCC)	28-84	Designed for applications that do not require low-profile packages with high density of interconnects.	Personal computers, scanners, electronic games and monitors.
Plastic Dual In-line Package (PDIP)	8-64	Designed for consumer electronic products.	Telephones, televisions, audio/video applications and computer peripherals.
Plastic BGA	119-1520	Designed for semiconductors which require the enhanced performance provided by plastic BGA, including personal computer chipsets, graphic controllers and microprocessors, application-specific integrated circuits, digital signal processors and memory devices.	Telecommunications products, global positioning systems, notebook computers, disk drives and video cameras.
Stacked-Die BGA	120-1520	Combination of multiple dies in a single package enables package to have multiple functions within a small surface area.	Telecommunications products, local area networks, graphics processor applications, digital cameras and pagers.
Package-on-Package (POP, aMAP POP)	136-904	This technology places one package on top of another to integrate different functionalities while maintaining a compact size. It offers procurement flexibility, low cost of ownership, better total system cost and faster time to market. Designers typically use the topmost package for memory applications and the bottommost package for ASICs. By using this technology, the memory known good die issue can be mitigated and the development cycle time and cost can be reduced.	Cellular phones, personal digital assistants and system boards.
Land Grid Array (LGA)	10-72	Leadless package which is essentially a BGA package without the solder balls. Based on laminate substrate, land grid array packages allow flexible routing and are capable of	High frequency integrated circuits such as wireless communications products, computers servers, personal

multichip module functions.

computer peripherals and  
MEMS sensors.

***SiP and Modules.*** We assemble SiP products, which involve the integration of more than one chip into the same package. As miniaturization requirements for electronic devices increase, smaller and lighter SiPs are garnering much attention within the industry. Wafer level integration-passive device technology has become increasingly important. Passive devices such as inductors, capacitors, resistors, filters and diplexers are those components occupying the largest area in printed circuit boards; therefore, miniaturization and integration is key to SiPs. This can be achieved through integrating passive components on an individual substrate using a thin film process known as MCM-D or IPD (Integrated Passive Device). The IPD can then be used as a package substrate or interposer for SiP. This manufacturing method will enhance product performance and also reduce overall costs. The extension of our current RDL (Redistribution) process can be used to build high quality factor (Q) inductor and RF circuits on top of CMOS (Complementary Metal–Oxide–Semiconductor) wafers. IPD is an enabling technology for SiP. It can be used in the following three approaches to enhance product performance: several solutions to replace discrete components such as Balun and Filter, or to integrate certain passive components and act as interposer, or to replace PWB and act as a substrate of the module. We have the ability to offer any of the packaging methodologies related to the above technologies. In addition, we also leverage some of our SMT-based technologies, such as compartment shielding, double sided module and antenna integration.

Table of Contents

We also offer module assembly services, which combine one or more packaged semiconductors with other components in an integrated module to enable increased functionality, typically using automated SMT machines and other machinery and equipment for system-level assembly. End-use applications for modules include cellular phones, wireless LAN applications, Bluetooth applications, camera modules, automotive applications, toys, networking, storage, and power management.

**Automotive Electronics.** We assemble automotive electronic products based on our leading technology, good quality systems and automation. We provide a variety of products, such as leadframe base, substrate base, Flip-Chip and Wafer-Level packages. We also provide robust package solutions to customers and end-users, including most types of industrial package solutions together with tailor-made solutions to meet customers' and end-users' requirements on automotive specifications.

Having accumulated production experience in using gold wire for automotive devices over several years, we collaborate with certain customers to develop and release copper wire for advanced wafer process (65nm for QFP and 40 nm for BGA) development that will fulfill criteria in AEC-G100 and in the early development of the 28 nm wafer process with hybrid packaging structure (FC bonding + wirebonding). In addition, we offer the FOWLP solution for radar products according to requests from some tier 1 customers.

**Interconnect Materials.** Interconnect materials connect the input/output on the semiconductor dies to the printed circuit board. Interconnect materials include substrate, which is a multi-layer miniature printed circuit board, and is an important element of the electrical characteristics and overall performance of semiconductors. We produce substrates for use in our packaging operations.

The demand for higher performance semiconductors in smaller packages will continue to spur the development of IC substrates that can support the advancement in circuit design and fabrication. As a result, we believe that the market for substrates will grow and the cost of substrates as a percentage of the total packaging process will increase. In the past, substrates we designed for our customers were produced by independent substrate manufacturers. Since 1997, we have been designing and producing a portion of our interconnect materials in-house. In 2017, our interconnect materials operations supplied approximately 25.91% of our consolidated substrate requirements by value.

The following table sets forth, for the periods indicated, the percentage of our packaging revenues accounted for by each principal type of packaging products or services.

Year Ended December 31,			
2015	2016	2017	



Bumping, Flip Chip, WLP and SiP	27.1 %	28.6 %	29.9 %
IC Wirebonding <sup>(1)</sup>	61.9	61.4	59.2
Discrete and other	11.0	10.0	10.9
Total	100.0%	100.0%	100.0%

(1) Includes leadframe-based packages such as QFP/TQFP, QFN/MCC and PLCC/PDIP and substrate-based packages, such as various BGA package types and LGA.

## Table of Contents

### Testing Services

We provide a complete range of semiconductor testing services, including front-end engineering testing, wafer probing, final testing of logic/mixed-signal/RF/(2.5D/3D) module and SiP/ MEMS/Discrete and other test-related services.

The testing of semiconductors requires technical expertise and knowledge of the specific applications and functions of the semiconductors tested as well as the testing equipment utilized. We believe that our testing services employ technology and expertise which are among the most sophisticated in the semiconductor industry. In addition to maintaining different types of testing equipment, which enables us to test a variety of semiconductor functions, we work closely with our customers to design effective testing solutions on multiple equipment platforms for particular semiconductors.

In recent years, complex, high-performance logic/mixed-signal/RF/(2.5D/3D) module and SiP/MEMS semiconductors have accounted for an increasing portion of our testing revenues.

***Front-End Engineering Testing.*** We provide front-end engineering testing services, including customized software development, electrical design validation, and reliability and failure analysis.

***Customized Software Development.*** Test engineers develop customized software to test the semiconductors using our equipment. Customized software, developed on specific test platforms, is required to test the conformity of each particular semiconductor type to its unique functionality and specification.

***Electrical Design Validation.*** A prototype of the designed semiconductor is subjected to electrical tests using advanced test equipment and customized software. 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 intended applications. Reliability testing can include “burn-in” services, which electrically stress a device, usually at high temperature and voltage, for a period of time long enough to cause the failure of marginal devices.

***Failure Analysis.*** In the event that the prototype semiconductor does not function to specifications during either the electrical design validation or reliability testing processes, it is typically subjected to failure analysis to determine the cause of the failure to perform as anticipated. As part of this analysis, the prototype semiconductor may be subjected

to a variety of analyses, including electron beam probing and electrical testing.

**Wafer Probing.** Wafer probing is the step immediately before the packaging 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 services require expertise and testing equipment similar to that used in final testing, and most of our testers can also be used for wafer probing.

**Logic/Mixed-signal/RF/(2.5D/3D) module and SiP/Discrete Final Testing.** We conduct final tests of a wide variety of logic/mixed-signal/RF/(2.5D/3D) module and SiP/ MEMS /discrete semiconductors, with the number of leads or bumps ranging from the single digits to over ten thousand and operating frequencies of over 12 Gbps for digital semiconductors and mmWave for radio frequency semiconductors, which are at the high end of the range for the industry. The products we test include semiconductors used for wired, wireless and mobile communications, automotive, home entertainment, personal computer, artificial intelligence, and high performance computing applications, as well as a variety of consumer and application-specific integrated circuits for various specialized applications.

Table of Contents

**Other Test-Related Services.** We provide a broad range of additional test-related services, such as:

**Electric Interface Board and Mechanical Test Tool Design.** Process of designing individualized testing apparatuses such as test load boards, sockets, handler change kits, and probe cards for unique semiconductor devices and packages.

**Program Conversion.** Process of converting a program from one test platform to different test platforms to reduce testing costs or optimize testing capacity.

**Program Efficiency Improvement.** Process of optimizing the program code or increasing site count of parallel tests to improve testing throughout.

**Burn-in Testing.** Burn-in testing is the process of electrically stressing a device, usually at high temperature and voltage, for a period of time to simulate the continuous use of the device to determine whether this use would cause the failure of marginal devices.

**Module and SiP Testing.** We provide module and SiP testing through integrated bench solution or automatic test equipment to our customers with a complete solution with respect to finger print sensor module, camera module, 3D depth sensing module, wireless connectivity devices, global positioning system devices, personal navigation devices and digital video broadcasting devices.

**Tape and Reel.** Process which involves transferring semiconductors from a tray or tube into a tape-like carrier for shipment to customers.

**Drop Shipment Services.** We offer drop shipment services for shipment of semiconductors directly to end users designated by our customers. Drop shipment services are provided mostly in conjunction with logic/mixed-signal/RF/3D IC/discrete testing. We provide drop shipment services to a significant percentage of our testing customers. A substantial portion of our customers at each of our facilities have qualified these facilities for drop shipment services. Since drop shipment eliminates the additional step of inspection by the customer before shipment to the end user, quality of service is a key consideration. 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.

The following table sets forth, for the periods indicated, the percentage of our testing revenues accounted for by each type of testing service.

Year Ended December 31,

	2015		2016		2017	
Testing Services:						
Front-end engineering testing	4.2	%	3.6	%	3.4	%
Wafer probing	20.1		19.7		16.7	
Final testing	75.7		76.7		79.9	
Total	100.0%		100.0%		100.0%	

***Electronic Manufacturing Services.*** Since our acquisition of a controlling interest in Universal Scientific in February 2010, we also provide integrated solutions for electronic manufacturing services in relation to computers, peripherals, communications, industrial, automotive, and storage and server applications. The key products and services we offer to our customers, for instance, include:

- Computers: motherboards for server & desktop PC; peripheral; port replicator;

- Communications: Wi-Fi; SiP;

- Consumer products: control boards for flat panel devices; SiP;

- Automotive electronics: automotive electronic manufacturing services; car LED lighting; regulator/rectifier;

## Table of Contents

Industrial products: point-of-sale systems; smart handheld devices;

Storage: network attach system; network video record; solid state driver; and

Others: field replacement unit; return material authorization

## Seasonality

See “Item 5. Operating and Financial Review and Prospects—Operating Results and Trend Information—Quarterly Operating Revenues, Gross Profit and Gross Margin.”

## Sales and Marketing

### Sales and Marketing Presence

We maintain sales and marketing offices in Taiwan, the United States, Belgium, Singapore, the PRC, Korea, Malaysia, Japan and a number of other countries. We also have sales representatives operating in certain other countries in which we do not have offices. Our sales and marketing offices in Taiwan are located in Hsinchu and Kaohsiung. We conduct marketing research through our customer service personnel and through our relationships with our customers and suppliers to keep abreast of market trends and developments. We also provide advice in the area of production process technology to our major customers planning the introduction of new products. In placing orders with us, our customers specify which of our facilities these orders will go to. Our customers conduct separate qualification and correlation processes for each of our facilities that they use. See “—Qualification and Correlation by Customers.”

### Customers

Our five largest customers together accounted for approximately 48.2%, 42.0% and 46.4% of our operating revenues in 2015, 2016 and 2017, respectively. One customer accounted for more than 10.0% of our operating revenues in 2015, 2016 and 2017.

We package and test for our customers a wide range of products with end-use applications in the communications, computing, and consumer electronics/industrial/automotive sectors. The following table sets forth a breakdown of the percentage of our operating revenues generated from our packaging and testing services, for the periods indicated, by the principal end-use applications of the products that we packaged and tested.

	Year Ended December 31,		
	2015	2016	2017
Communications	54.7 %	52.2 %	48.9 %
Computing	11.1	11.5	11.5
Consumer electronics/industrial/automotive/other	34.2	36.3	39.6
Total	100.0%	100.0%	100.0%

In addition, we have provided electronic manufacturing services since our acquisition of the controlling interest of Universal Scientific in February 2010. Our electronic manufacturing services provide a wide range of products with end-use applications. The following table sets forth a breakdown of the percentage of our operating revenues generated from our electronic manufacturing services for the periods indicated by the principal end-use applications.

Table of Contents

	Year Ended December 31,		
	2015	2016	2017
Communications	53.2 %	50.6 %	45.5 %
Computing and storage	14.3	16.9	15.0
Consumer electronics	18.7	18.4	25.9
Industrial	8.1	7.2	7.3
Automotive	4.9	6.0	5.6
Other	0.8	0.9	0.7
Total	100.0%	100.0%	100.0%

We categorize our operating revenues geographically based on the country in which the customer is headquartered. The following table sets forth, for the periods indicated, the percentage breakdown by geographic regions of our operating revenues.

	Year Ended December 31,		
	2015	2016	2017
United States	72.6 %	65.8 %	67.6 %
Taiwan	11.5	14.1	12.2
Asia	8.1	10.9	10.4
Europe	7.3	8.5	9.1
Other	0.5	0.7	0.7
Total	100.0%	100.0%	100.0%

## Qualification and Correlation by Customers

Customers generally require that our facilities undergo a stringent qualification process during which the customer evaluates our operations and production processes, including engineering, delivery control and testing capabilities. The qualification process typically takes up to several weeks, but can take longer depending on the requirements of the customer. In the case of our testing operations, 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 sample semiconductors to be tested and either provides us with the test program or requests that we develop a conversion program. In some cases, the customer also provides us with a data log of results of any testing of the semiconductors 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. We believe our ability to provide turnkey services reduces the amount of time spent by our customers in the qualification and correlation process. As a result, customers utilizing our turnkey services are able to achieve shorter production cycles.

## Pricing



We price our packaging services and electronic manufacturing services, taking into account the actual costs, with reference to prevailing market prices. We price our testing services primarily on the basis of the amount of time, measured in central processing unit seconds, taken by the automated testing equipment to execute the test programs specific to the products being tested, as well as the cost of the equipment, with reference to prevailing market prices. Prices for our packaging, testing and electronic manufacturing services are confirmed at the time orders are received from customers, which is typically several weeks before delivery.

#### Raw Materials and Suppliers

#### Packaging

The principal raw materials used in our packaging processes are interconnect materials such as leadframes and substrates, gold wire and molding compound. The silicon die, which is the functional unit of the semiconductor to be packaged, is supplied in the form of silicon wafers. Each silicon wafer contains a number of identical dies. We receive the wafers from the customers or the foundries on a consignment basis. Consequently, we generally do not incur inventory costs relating to the silicon wafers used in our packaging process.

## Table of Contents

We do not maintain large inventories of leadframes, substrates, gold wire or molding compound, but generally maintain sufficient stock of each principal raw material based on blanket orders and rolling forecasts of near-term requirements received from customers. In addition, several of our principal suppliers dedicate portions of their inventories as reserves to meet our production requirements. However, shortages in the supply of materials experienced by the semiconductor industry have in the past resulted in occasional price adjustments and delivery delays. For example, in the first half of 2000, the industry experienced a shortage in the supply of IC substrates used in BGA packages, which, at the time, were only available from a limited number of suppliers located primarily in Japan. In order to reduce the adverse impact caused by the price fluctuations of raw materials, we have developed substitute raw materials, such as copper, the cost of which is much cheaper than that of gold. However, we cannot guarantee that we will not experience shortages or price increase in the near future or that we will be able to obtain adequate supplies of raw materials in a timely manner and at a reasonable price or to develop any substitute raw materials. In the event of a shortage and/or price increase, we generally inform our customers and work together to accommodate changes in delivery schedules and/or the price increase of raw materials.

We produce substrates for use in our packaging operations. In 2017, our interconnect materials operations supplied approximately 25.9% of our consolidated substrate requirements by value. See “—Principal Products and Services—Interconnect Materials.”

As a result of the “Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment,” or RoHS, which became effective on July 1, 2006, we have adjusted our purchases of raw materials and our production processes in order to use raw materials that comply with this legislation for part of our production. This legislation restricts the use in the European Union, or EU, of certain substances the EU deems harmful to consumers, which includes certain grades of molding compounds, solder and other raw materials that are used in our products. Manufacturers of electrical and electronic equipment must comply with this legislation in order to sell their products in an EU member state. Any failure by us to comply with regulatory environmental standards such as Directive 2002/95/EC may have a material adverse effect on our results of operations.

## Testing

For the functional and burn-in testing of semiconductors, no other raw materials are needed. However, we often design and outsource the manufacturing of test interface products such as load boards, probe cards and burn-in boards.

## Electronic Manufacturing Services

Our manufacturing processes use many raw materials in our electronic manufacturing services. For 2017, raw materials costs accounted for 79.3% of our operating revenues from electronic manufacturing services. Our principal raw materials include, among others, printed circuit boards, integrated chips, ink, semiconductor devices, computer

peripherals and related accessories and electronic components. Our principal raw materials varied in the past, depending on the end-use products we provided.

To ensure quality, on-time delivery and pricing competitiveness, we have established both a standardized supplier assessment system and an evaluation mechanism, continued to maintain close working relationships with our suppliers and jointly created a stable and sustainable supply chain. In addition, we adjusted the procurement strategy in line with industry trends as well as the nature of raw materials and decentralized the sources of raw materials to lower our supply concentration risk. However, we cannot assure you that we will not experience any shortages or price increases in the near future. See “Item 3. Key Information—Risk Factors—Risks Relating to Our Business—Our revenues and profitability may decline if we are unable to obtain adequate supplies of raw materials in a timely manner and at a reasonable price.”

## Table of Contents

### Equipment

### Packaging

Wire bonding process is important for routing signal out of die to the system for the IC wire-bonding solutions. Thus, wire bonder is the important equipment used for such process. As products become finer and finer pitch, bumping process will replace wire bonding process for the signal routing purpose. Thus, sputter and plater will be the crucial equipment for this type of process.

Wire bonders connect the input/output terminals on the silicon die using extremely fine gold or copper wire to leads on leadframes or substrates. Typically, a wire bonder may be used, with minor modifications, for the packaging of different products. As of January 31, 2018, we operated an aggregate of 16,075 wire bonders, of which 16,027 were fine-pitch wire bonders. As of the same date, 22 of the wire bonders operated by us were consigned by customers and none were leased under operating leases. For the packaging of certain types of substrate-based packages, die bonders are used in place of wire bonders. The number of bonders at a given facility is commonly used as a measure of the packaging capacity of the facility. In addition to bonders, we maintain a variety of other types of packaging equipment, such as wafer grind, wafer mount, wafer saw, automated molding machines, laser markers, solder plate, pad printers, dejunkers, trimmers, formers, substrate saws and scanners. We purchase our packaging equipment from major international manufactures, including Disco Corporation, BE Semiconductor Industries N.V., Kulicke & Soffa Pte Ltd., Tokyo Electron Limited, TOWA Corporation and ASM Pacific Technology.

### Testing

Testing equipment is the most capital intensive component of the testing process. We generally seek to purchase testers from different suppliers with similar functionality and the ability to test a variety of different semiconductors. We purchase testers from major international manufacturers, including Teradyne, Inc., Advantest Ltd., LTX-Credence Corporation, Hontech and Tokyo Electron Limited. Upon acquisition of new testers, we install, configure, calibrate, perform burn-in diagnostic tests on and establish parameters for the testers based on the anticipated requirements of existing and potential customers and considerations relating to market trends. As of January 31, 2018, we operated an aggregate of 3,755 testers, of which 1,250 were consigned by customers and 53 were leased under operating leases. In addition to testers, we maintain a variety of other types of testing equipment, such as automated handlers and probers (special handlers for wafer probing), scanners, reformers and computer workstations for use in software development. Each tester may be attached to a handler or prober. Handlers attach to testers and transport individual packaged semiconductor to the tester interface. Probers similarly attach to the tester and align each individual die on a wafer with the interface to the tester.

For the majority of our testing equipment, we often base our purchases on prior discussions with our customers about their forecast requirements. The balance consists of testing equipment on consignment from customers and which are dedicated exclusively to the testing of these customers' specific products.

Test programs, which consist of the software that drives the testing of specific semiconductors, are written for a specific testing platform. We sometimes perform test program conversions that enable us to test semiconductors on multiple test platforms. This portability between testers enables us to allocate semiconductors tested across our available test capabilities and thereby improve capacity utilization rates. In cases where a customer requires the testing of a semiconductor product that is not yet fully developed, the customer may provide computer workstations to us to test specific functions. In cases where a customer has specified testing equipment that was not widely applicable to other products that we test, we have required the customer to furnish the equipment on a consignment basis.

#### Electronic Manufacturing Services

The SMT assembly line is the key facility of our electronic manufacturing operations, and generally includes a printer and one or two high-speed mounters and/or a multi-function mounter. The SMT assembly process primarily consists of the following three manufacturing steps: (i) solder paste stencil printing, (ii) component placement and (iii) solder reflow. High-speed SMT assembly systems offer both economic and technical advantages that may reduce both production cost and time while meeting quality requirements. Thus, SMT has become the most popular assembly method for sophisticated electronic devices. We had 122 SMT lines as of January 31, 2018.

## Table of Contents

### Intellectual Property

As of January 31, 2018, we held 1,654 Taiwan patents, 981 U.S. patents, 1,042 PRC patents and 16 patents in other countries related to various semiconductor packaging technologies and invention, utility and design on our electronic manufacturing services. In addition, we also filed several trademarks applications in Taiwan, the United States, China and the European Union. For example, “ASE”, “aCSP”, “ a-EASI”, “a-fcCSP”, “aQFN” “a-QFN”, “a-TiV”, “iSiP”, “iWLP” and have been registered in Taiwan.

We have also entered into various non-exclusive technology license agreements with other companies involved in the semiconductor manufacturing process, including Fujitsu Limited, Flip Chip International, L.L.C., Mitsui High-Tec, Inc., Infineon Technologies AG, TDK Corporation and Deca Technologies Inc. The technology we license from these companies includes solder bumping, redistribution, ultra CSP assembly, advanced QFN assembly, wafer level packaging and other technologies used in the production of package types, such as BCC, flip-chip BGA, film BGA, aQFN and chip embedding. Our license agreements with Flip Chip International, L.L.C. and SPIL will not expire until the expiration of the patents licensed by the agreement. Our license agreement with Infineon Technologies AG will expire on November 5, 2018. Our license agreement with Mitsui High-Tec, Inc. renews automatically each year, and our license agreement with Fujitsu Limited renews automatically each year unless the parties to the agreement agree otherwise. Our license agreement with TDK Corporation will remain in effect until expiration of the TDK’s patents licensed by the agreement. Our license agreement with Deca Technologies Inc. will expire on January 13, 2026. Our success depends in part on our ability to obtain, maintain and protect our patents, licenses and other intellectual property rights, including rights under our license agreements with third parties.

### Quality Control

We believe that our process technology and reputation for high quality and reliable services have been important factors in attracting and retaining leading international semiconductor companies as customers for our services and/or products. We maintain a quality control staff at each of our facilities. Our quality control staff typically includes engineers, technicians and other employees who monitor the processes in order to ensure high quality. Our quality assurance systems impose strict process controls, statistical in-line monitors, supplier control, data review and management, quality controls and corrective action systems. Our quality control employees operate quality control stations along production lines, monitor clean room environments and follow up on quality through outgoing product inspection and interaction with customer service staff. We have established quality control systems that are designed to ensure high quality products/service to customers, high testing reliability and high production yields at our facilities. We also have established an environmental management system in order to ensure that we can comply with the environmental standards of our customers and the countries within which they operate. See “—Raw Materials and Suppliers—Packaging.” In addition, our facilities have been qualified by all of our major customers after satisfying stringent quality standards prescribed by these customers.

Our packaging and testing operations are undertaken in clean rooms where air purity, temperature and humidity are controlled. To ensure stability and integrity of our operations, we maintain clean rooms at our facilities that meet U.S. Federal Standard 209E class 1,000, 10,000 and 100,000 standards.

ISE Labs' testing facilities in Fremont, California, are considered suitably equipped by the Defense Logistics Agency to perform the MIL-STD-883 tests on monolithic microcircuits in accordance with the requirements of military specification MIL-PRF-38535.

We have also obtained many certifications on our packaging, testing and interconnect materials facilities. Some of these certifications are required by some semiconductor manufacturers as a threshold indicator of company's quality control standards or needed by many countries in connection with sales of industrial products. The table below sets forth the certifications we have for our packaging, testing and interconnect materials.

Table of Contents

Location	ISO/TS 16949 <sup>(2)</sup>	ISO 14001 <sup>(3)</sup>	ISO 17025 <sup>(4)</sup>	ISO 14064-1 <sup>(5)</sup>	ISO 14067 <sup>(6)</sup>	IECQ HSPM QC080000 <sup>(7)</sup>	Sony Green <sup>(8)</sup>	OHSAS 18001 <sup>(9)</sup>	TOSHMA <sup>(10)</sup>	ISO 50001 <sup>(11)</sup>	ISO-13485 <sup>(12)</sup>	ISO 28000 <sup>(13)</sup>
Taiwan	ü	ü	ü	ü	ü	ü	ü	ü	ü	ü	ü	ü
Shanghai, PRC	ü	ü		ü		ü		ü				
Suzhou/Kunshan/Weihai/Wuxi, PRC	ü	ü		ü		ü	ü	ü				
Korea	ü	ü				ü	ü	ü				
Japan	ü	ü				ü	ü					
Malaysia	ü	ü		ü		ü	ü					
Singapore	ü	ü				ü		ü				
California	ü	ü	ü									

ISO/TS16949 standards were originally created by the International Automotive Task Force in conjunction with (1) the International Standards Organization, or ISO. These standards provide for continuous improvement with an emphasis on the prevention of defects and reduction of variation and waste in the supply chain.

ISO 9001 quality standards, set by the ISO, are related to quality management systems and designed to help (2) organizations ensure that they meet the needs of customers and other stakeholders while meeting statutory and regulatory requirements related to the product.

(3) ISO 14001 sets out the criteria for an environmental management system. It can be used by any organization that wants to improve resource efficiency, reduce waste and drive down costs.

(4) ISO 17025 is the main ISO standard used by testing and calibration laboratories.

ISO 14064-1 standard is part of the ISO 14000 series of International Standards for environmental management. (5) The ISO 14064 standard provides governments, businesses, regions and other organizations with a complementary set of tools for programs to quantify, monitor, report and verify greenhouse gas emissions.

ISO 14067 specifies principles, requirements and guidelines for the quantification and communication of the (6) carbon footprint of a product based on International Standards on life cycle assessment for quantification and on environmental labels and declarations for communication.

(7) IECQ HSPM QC080000 is a certification designed to manage, reduce and eliminate hazardous substances.

(8) “Sony Green Partner” indicates our compliance with the “Sony Green Package” standard requirements.



OHSAS 18001 is a set of standards designed upon collaboration with occupational health and safety experts and (9) now offered by many certification organizations as an indication of compliance with certain standards for occupational health and safety.

(10) TOSHMS is the Taiwan Occupational and Health Management System.

(11) ISO50001 is a standard for an energy management system. It can be used by any organization that wants to reduce energy costs and use energy more efficiently.

ISO 13485 quality management system sets forth the quality requirements for organizations that are required to (12) consistently meet customers' requirements and regulatory requirements in the medical devices and related services industry.

(13) ISO 28000 is an international standard for security management system dealing with security assurance in a supply chain.

(14) ISO 26262 is an international standard for functional safety of electrical and electronic systems in production automobiles defined by ISO.

ISO 15408-EAL6 is a framework that outlines the criteria for globally recognized standards and security (15) inspections for IT products. It is designed for products and applications that are targeted for high security-intensive markets, such as the government, banking or defense sectors.

Table of Contents

Since our acquisition of a controlling interest in Universal Scientific in February 2010, we began providing electronic manufacturing services, for which we also have strict process controls. The table below sets forth the certifications we have obtained for our electronic manufacturing services facilities.

Location	ISO/TS 16949	ISO 9001	ISO 14001	ISO 14064-1	IECQ QC 080000	TL 9000 <sup>(1)</sup>	OHSASISO 18001 50001	ISO 17025	ISO 26262	TOSHMS	ISO 13485
Taiwan	ü	ü	ü	ü	ü		ü	ü		ü	
Shenzhen, PRC		ü	ü	ü	ü	ü	ü	ü			
Shanghai, PRC	ü	ü	ü	ü	ü	ü	ü	ü	ü		
Kunshan, PRC	ü	ü	ü	ü	ü	ü	ü	ü	ü		ü
Mexico	ü	ü	ü	ü	ü		ü	ü			

(1) TL 9000 quality management system sets forth the supply chain quality requirements of the global communications industry.

In addition, we have received various vendor awards from our customers for the quality of our products and services.

### Competition

The global market for semiconductor packaging and testing markets is highly competitive. We face competition from a number of sources and integrated device manufacturers with in-house packaging and testing capabilities and fabless semiconductor design companies with their own in-house testing capabilities. Some of these integrated device manufacturers have commenced, or may commence, in-house packaging and testing operations in Asia. Substantially all of packaging and testing companies that compete with us have established operations in Taiwan and across the region.

Integrated device manufacturers that use our services continuously evaluate our performance against their own in-house packaging and testing capabilities. These integrated device manufacturers may have access to more sophisticated technologies and greater financial and other resources than we do. We believe, however, that we can offer greater efficiency at lower cost while maintaining equivalent or higher quality for several reasons. First, as we benefit from specialization and economies of scale by providing services to a large base of customers across a wide range of products, we are better able to reduce costs and shorten production cycles through high capacity utilization and process expertise. Second, as a result of our customer base and product offerings, our equipment generally has a longer useful life. Third, as a result of the continuing reduction of investments in in-house packaging and testing

capacity and technology at integrated device manufacturers, we are better positioned to meet their packaging and testing requirements on a large scale.

Our packaging and testing business also faces actual and potential competition from companies at other levels of the supply chain, which have the financial resources and technical capabilities to enter and compete effectively with us. For example, TSMC has launched integrated fan-out (“InFO”) technology, which is scheduled to be put into mass production in 2016. InFO is expected to further intensify the competition in the packaging and testing industry.

Our electronic manufacturing services business, operated by our subsidiary Universal Scientific, faces significant competition from other electronic manufacturing services providers, such as Hon Hai Precision Ind. Co., Ltd., with comprehensive integration, wide geographic coverage and large production capabilities that enable them to achieve economies of scale. We believe, however, that we can still achieve satisfactory performance in the market given that we have been able to provide products with high quality and we are capable of designing new products by cooperating with our customers.

#### Environmental Matters

Our operations of packaging, interconnect materials and electronic manufacturing services generate environmental wastes, including gaseous chemical, liquid and solid industrial wastes. We have installed various types of anti-pollution equipment for the treatment of liquid and gaseous chemical waste generated at our facilities. We believe that we have adopted adequate anti-pollution measures for the effective maintenance of environmental protection standards that are consistent with industry practice in the countries in which our facilities are located. In addition, we believe we are in compliance in all material respects with present environmental laws and regulations applicable to our operations and facilities.

Table of Contents

Furthermore, in order to demonstrate our commitment to environmental protection, in December 2013, our board of directors approved contributions to environmental protection efforts in Taiwan in a total amount of not less than NT\$3,000.0 million, to be made in the following 30 years. For the years ended December 31, 2015, 2016 and 2017, we have made contributions in the amount of NT\$100.0 million (US\$3.4 million) each, respectively, through ASE Cultural and Educational Foundation to fund various environmental projects, and our board of directors have resolved in a resolution in January 2018 to contribute NT\$100.0 million (US\$3.4 million) through ASE Cultural and Educational Foundation in environmental projects in 2018. Our estimated environmental capital expenditures for 2018 will be approximately US\$13.3 million, of which 3.9% will be used in climate change adaptation.

ASE Inc. Kaohsiung facility

Our operations involving wafer-level process and require wastewater treatment at our K7 Plant have been subject to scrutiny by the Kaohsiung City Environmental Protection Bureau and the Kaohsiung District Prosecutors office as a result of alleged wastewater disposal violations that occurred on October 1, 2013.

On December 20, 2013, the Kaohsiung Environmental Protection Bureau imposed a fine of NT\$102.0 million (the “Administrative Fine”) upon us for alleged violations of the Water Pollution Control Act. We filed an administrative appeal to nullify the Administrative Fine, which was dismissed by the Kaohsiung City Government. In August 2014, we appealed to the Kaohsiung High Administrative Court seeking to (i) revoke Kaohsiung City Government’s decision, (ii) lift the administrative penalty imposed on us and (iii) demand a refund of the Administrative Fine. On March 22, 2016, the Kaohsiung High Administrative Court revoked Kaohsiung City Government’s decision and lifted the administrative penalty. Our demand for a refund of the Administrative Fine was dismissed. We appealed to the Supreme Administrative Court on April 14, 2016 against the Kaohsiung High Administrative Court’s unfavorable ruling in dismissing a refund. On June 8, 2017, the Supreme Administrative Court overturned Kaohsiung High Administrative Court’s decision and ordered Kaohsiung Environmental Protection Bureau to refund the Administrative Fine paid by us.

In connection with the same alleged violations at our K7 plant, in October 2014, the Kaohsiung District Court ruled that we were in violation of the ROC Waste Disposal Act and imposed on us a criminal penalty of NT\$3.0 million. We appealed the case to the Taiwan High Court Kaohsiung District Branch in November 2014. On September 29, 2015, the Taiwan High Court Kaohsiung District Branch overturned the decision made by Kaohsiung District Court and found us not guilty and repealed the criminal penalty imposed on us. The verdict was final and not appealable. For additional details of these administrative actions and judicial proceedings related to our K7 Plant see “Item 4. Information on the Company—Property, Plants and Equipment” and see “Item 8. Financial Information—Consolidated Statements and Other Financial Information—Legal Proceedings.” Defending against any of these pending or future actions will likely be costly and time-consuming and could significantly divert management’s efforts and resources.

Any future suspension of operations at K7 Plant or our other facilities may adversely affect our business, financial condition, results of operations and cash flows. See “Item 3. Key Information—Risk Factors—Risks Relating to Our

Business—Any environmental claims or failure to comply with any present or future environmental regulations, as well as any fire or other industrial accident, may require us to spend additional funds and may materially and adversely affect our financial condition and results of operations.”

## Climate Change Management

Climate change management is key to our corporate sustainability. We have established a clear focus on low-carbon development in response to climate change and fluctuating energy supply. We are committed to taking firm actions to mitigate the emission of greenhouse gases throughout our business operations. We aim to address and integrate climate change with our development strategies by (i) establishing an overall carbon management system to implement low-carbon strategies and policies in accordance with our three major guiding principles – “energy saving,” “green energy” and “energy storage”; (ii) investing in renewable energy; (iii) innovating and promoting low-carbon products and services; (iv) identifying our vulnerabilities to climate change and developing adaptation strategies; and (v) cultivating a “green” corporate culture and becoming a leading low-carbon solution provider. We have set up a Corporate Sustainability Committee (CSC) and adopted internal policies in our domestic and oversea subsidiaries to fulfill our commitment to sustainable development.

## Table of Contents

We believe that there are opportunities associated with climate change related risks and have implemented the following strategies to evaluate the risks and take advantage of the opportunities:

*Management procedures.* Since 2013, we have been using the Enterprise Risk Management (ERM) to manage climate change related risks. Consequently, potential risks induced by climate change are identified and assessed in a global scale. We have established a specific monitoring and control mechanism to reduce the adverse impacts of climate change on our business operation. The identified risks are managed by a variety of departments or functions (risk functions) across all parts of our organization.

*Identification processes for risks and opportunities.* The identification process for risks and opportunities is carried out at both company and asset level linked to multidimensional aspects. Natural disaster, sustainability development and low carbon technology are also the major factors to address climate change related risks. To do so, risk management programs are regularly implemented in our major manufacturing sites as well as all group-level functional departments and assets. Risk identification, assessment and response are three important steps in the ERM cycle. Risks and events that might have an influence on our business objectives are identified and evaluated, in order to decide on appropriate responses.

*Prioritize the risks and opportunities identified.* In accordance with a matrix analysis, the priority of climate change risks and opportunities are determined by the following criteria: timeframe, likelihood, control effectiveness and magnitude of impact on our sustainable operation. A comprehensive methodology is designed to evaluate the cost of implementation, effectiveness (degree to which a response will reduce impact), feasibility (difficulty) and time needed for implementation. Under a mechanism of prevention, early warning and emergency response to risks of different priorities, we believe that we will be able to effectively keep climate change risks under control.

Along with an increasing awareness of climate change crisis, energy saving and carbon reduction have become a mainstream concept for products or services, especially required by our customers. To meet the needs of customers and greenhouse gas mitigation, we continuously strive to provide high efficiency products as well as invest in the research and development for eco-friendly design. From the initial product design stage, we conscientiously incorporate the use of green materials and cleaner production as well as the construction of green buildings and the upgrading of existing ones. For instance, we have maintained a multi-site certification for ISO 14001 and ISO 50001, which regularly examines the effectiveness of our environment and energy management systems and helps to improve our resource efficiency and reduce waste.

Since 2012, we have incorporated green design standards and building concepts into the construction of our facilities. Starting in 2014, we have committed to constructing all new manufacturing facilities and office buildings in Taiwan following the most up-to-date green building standards, such as US LEED (Leadership in Energy and Environmental Design) and Taiwan EEWH (Ecology, Energy Saving, Waste Reduction and Health) standards. We have also adopted the green building concept to improve environmental performance of our existing buildings. In addition, we further promote "Green Factory Label Certification" by implementing the green building concept and cleaner production mechanism.

## Insurance

We have insurance policies covering property damage and damage to our production facilities, buildings and machinery. In addition, we have liability insurance policies, including but not limited to general liability insurance policies, product liability insurance policies for specified clients and products and directors' and officers' insurance policies. Significant damage to any of our production facilities would have a material adverse effect on our results of operations.

We are not insured against the loss of key personnel.

Table of Contents

ORGANIZATIONAL STRUCTURE

The following chart illustrates our corporate structure including our principal manufacturing subsidiaries as of January 31, 2018. The following chart does not include wholly owned intermediate holding companies, internal trading companies and those companies without active operations.

Our Consolidated Subsidiaries

ASE Test Taiwan

ASE Test Taiwan, which was acquired in 1990, is our wholly owned subsidiary. It is incorporated in Taiwan and is engaged in the testing of integrated circuits.

ASE Test Malaysia

ASE Test Malaysia, which was established in 1991, is our wholly owned subsidiary. It is incorporated in Malaysia and is engaged in the packaging and testing of integrated circuits.

ISE Labs

ISE Labs is our wholly owned subsidiary. It is a semiconductor company specializing in front-end engineering testing that is incorporated in the United States and has its principal facilities located in Fremont, California. We acquired 70.0% of the outstanding shares of ISE Labs in 1999 through ASE Test, and increased our holding to 100.0% through purchases made in 2000 and 2002.

ASE Singapore Pte. Ltd.



ASE Singapore Pte. Ltd., our wholly owned subsidiary, is incorporated in Singapore and provides packaging and testing services. We acquired ASE Singapore Pte. Ltd., which was wholly owned by ISE Lab, through our acquisition of ISE Lab in 1999. In January 2011, ASE Singapore II Pte. Ltd. (formerly, EEMS Test Singapore) merged into ASE Singapore Pte. Ltd. after we acquired ASE Singapore II Pte. Ltd. in August 2010.

#### ASE Electronics

ASE Material was established in 1997 as an ROC company for the production of interconnect materials, such as substrates, used in the packaging of semiconductors. We initially held a majority stake in ASE Material, but acquired the remaining equity by means of a merger of ASE Material with and into us in August 2004. In August 2006, we spun off the operations originally conducted through ASE Material into our wholly owned subsidiary ASE Electronics. ASE Electronics currently supplies our packaging operations with a substantial portion of our substrate requirements. The facilities of ASE Electronics are primarily located in the Nantze Export Processing Zone near our packaging and testing facilities in Kaohsiung, Taiwan.

Table of Contents

ASE Chung Li and ASE Korea

In July 1999, we purchased Motorola's Semiconductor Products Sector operations in Chung Li, Taiwan and Paju, South Korea for the packaging and testing of semiconductors, thereby forming ASE Chung Li and ASE Korea. In August 2004, we acquired the remaining outstanding shares of ASE Chung Li that we did not already own and merged ASE Chung Li into us.

ASE Japan

ASE Japan, which we acquired from NEC Electronics Corporation in May 2004, is our wholly owned subsidiary. It is incorporated in Japan and is engaged in the packaging and testing of semiconductors.

ASE Shanghai

ASE Shanghai was established in 2001 as a wholly owned subsidiary of ASE Inc. and began operations in June 2004. ASE Shanghai primarily manufactures and supplies interconnect materials for our packaging operations.

ASESH AT

We acquired 100% equity interest in GAPTECH, now known as ASESAT, in January 2007 for a purchase price of US\$60.0 million. ASESAT is a PRC company based in Shanghai, China that provides packaging and testing services for a wide range of semiconductors.

ASEN

In September 2007, we acquired 60.0% equity interest in ASEN, formerly known as NXP Semiconductors Suzhou Ltd., from NXP Semiconductors for a purchase price of US\$21.6 million. In March 2018, our board of directors approved to acquire the remaining 40.0% equity interest in ASEN for a purchase price of US\$127.1 million. ASEN is based in Suzhou, China and is engaged in semiconductor packaging and testing.

## ASEWH

In May 2008, we acquired 100.0% of the shares of ASEWH from Aimhigh Global Corp. and TCC Steel. ASEWH is based in Weihai, Shandong, China and is engaged in semiconductor packaging and testing.

## ASEKS

ASEKS was set up in 2004 and began operating in 2010. ASEKS is based in Kunshan, China and is engaged in semiconductor packaging and testing.

## Wuxi Tongzhi

In May 2013, we, through our subsidiary ASES AT, acquired 100.0% of the shares of Wuxi Tongzhi from Toshiba Semiconductor (Wuxi) Co, Ltd. Wuxi Tongzhi is based in Wuxi, China and is engaged in semiconductor packaging and testing.

## USI Group

USI Group engages primarily in electronic manufacturing services in relation to computers, consumer electronics, communications, industrial and automotive, among other services and businesses. We purchased 22.6% of the outstanding shares of Universal Scientific in 1999. We subsequently increased our holding to 23.3% in 2000. As of December 31, 2009, we held approximately 18.1% of Universal Scientific's outstanding equity shares, which allowed us to exercise significant influence over Universal Scientific and therefore accounted for this investment by the equity method. In February 2010, we, along with our two subsidiaries, J&R Holding Limited and ASE Test, through a cash and stock tender offer, acquired 641,669,316 common shares of Universal Scientific at NT\$21 per share, amounting to NT\$13,475.1 million in total, resulting in our controlling ownership over Universal Scientific.

As a result, Universal Scientific became our subsidiary. The shares of Universal Scientific were delisted from the TWSE on June 17, 2010, which were previously listed under the symbol "2350." In August 2010, we acquired additional 222,243,661 shares of Universal Scientific through another tender offer at NT\$21 per share, amounting to NT\$4,667.1 million in total. In September 2012, as part of our internal business restructuring, our subsidiaries transferred their shareholdings in Universal Scientific to ASE Inc.



## Table of Contents

In February 2012, Universal Scientific Shanghai completed its IPO on the Shanghai Stock Exchange. The total proceeds from the IPO was approximately RMB811.7 million prior to deducting underwriting discounts and commissions. In November 2014, Universal Scientific Shanghai completed its capital increase by way of domestic private placements through a bidding process, raising a total of RMB2,063.0 million prior to deducting underwriting discounts and commissions. The issue price per share was RMB27.06. As of January 31, 2018, we indirectly held 75.8% of the total outstanding shares of Universal Scientific Shanghai through our subsidiaries USI Inc. and ASE Shanghai.

On February 2, 2015, Universal Scientific's shareholders passed a resolution at the shareholders' meeting to spin-off and assign Universal Scientific's investment businesses with a then-estimated value of NT\$35,537.8 million to USI Inc. In April 2015, Universal Scientific completed a spin-off of its subsidiaries to USI Inc., a company incorporated under ROC law. As part of our business realignment effort, we acquired 990.1 million shares in USI Inc. on the spin-off record date, which resulted in us holding 99.2% of the total then outstanding shares of USI Inc. Following Universal Scientific's spin-off of its investment businesses to USI Inc., Universal Scientific carried out a capital reduction plan reducing its capital from NT\$16,413.0 million to NT\$400.0 million. As a result of such spin-off, as of April 1, 2015, we held approximately 99.0% of the outstanding common shares of Universal Scientific.

On September 24, 2015, as part of our corporate reorganization to align each business function to different legal entity groups, the board of directors of ASE Inc. passed a resolution to announce our intention to carry out the Universal Scientific Share Transfer. The Universal Scientific Share Transfer was approved by the Investment Commission of MOEA on February 3, 2016. The majority of shares were transferred in March 2016, and the remaining shares were transferred in May 2016. Following the completion of the Universal Scientific Share Transfer, USI Group will operate under the legal entities directly and indirectly held under USI Inc. See "Item 4. Information on the Company—Information on the Company—History and Development of the Company—USI Group Restructuring" for more information.

In January 2017, Universal Scientific completed a cash capital increase of NT\$1,000 million (US\$33.7 million) and our shareholdings of Universal Scientific increased to 75.7%.

As of January 31, 2018, ASE Inc. indirectly held 75.7% of Universal Scientific.

## PROPERTY, PLANTS AND EQUIPMENT

We operate a number of packaging, testing and electronic manufacturing facilities in Asia and the United States. Our facilities provide varying types or levels of services with respect to different end-product focus, customers, technologies and geographic locations. With our diverse facilities we are able to tailor our packaging, testing and electronic manufacturing solutions closely to our customers' needs. The following table sets forth the location,

commencement of operation, primary use, approximate floor space and ownership of our principal facilities as of January 31, 2018.

Table of Contents

<b>Facility</b>	<b>Location</b>	<b>Commencement of Operation</b>	<b>Primary Use</b>	<b>Approximate Floor Space (in sq. ft.)</b>	<b>Owned or Leased</b>
ASE Inc.	Kaohsiung, ROC	March 1984	Our primary packaging facility, which offers complete semiconductor manufacturing solutions in conjunction with ASE Test Taiwan and foundries located in Taiwan. Focuses primarily on packaging services such as flip-chip, wafer bumping and fine-pitch wire bonding.	6,788,000	Land: leased Buildings: owned and leased
	Chung Li, ROC	Acquired in July 1999	An integrated packaging and testing facility that specializes in semiconductors for communications and consumer applications.	4,162,000	Land and buildings: owned
ASE Test Taiwan	Kaohsiung, ROC	Acquired in April 1990	Our primary testing facilities, which offer complete semiconductor manufacturing solutions in conjunction with ASE Inc.'s facility in Kaohsiung and foundries located in Taiwan. Focuses primarily on advanced logic/mixed-signal/RF/3D IC testing for integrated device manufacturers, fabless design companies and system companies.	845,000	Land: leased Buildings: owned and leased
ASE Test Malaysia	Penang, Malaysia	February 1991	An integrated packaging and testing facility that focuses primarily on the requirements of integrated device manufacturers.	1,102,000	Land: leased Buildings: owned
ASE Korea	Paju, Korea	Acquired in July 1999	An integrated packaging and testing facility that specializes in semiconductors for radio frequency, sensor and automotive applications.	1,294,000	Land and buildings: owned
ISE Labs	California, USA Texas, USA	Acquired in May 1999	Front-end engineering and final testing facilities located in northern California in close proximity to some of the world's largest fabless design companies. Testing facilities located in close proximity to integrated device manufacturers and fabless companies in Texas.	96,000	Land and buildings: owned and leased
ASE Singapore	Singapore	Acquired in May 1999	An integrated packaging and testing facility that specializes in semiconductors for communication, computers and consumer applications.	282,000	Land: leased Buildings: owned and leased





Table of Contents

<b>Facility</b>	<b>Location</b>	<b>Commencement of Operation</b>	<b>Primary Use</b>	<b>Approximate Floor Space (in sq. ft.)</b>	<b>Owned or Leased</b>
ASE Shanghai	Shanghai, China	June 2004	Design and production of semiconductor packaging materials.	1,689,000	Land: leased Buildings: owned
ASE Japan	Takahata, Japan	Acquired in May 2004	An integrated packaging and testing facility that specializes in semiconductors for cellular phone, household appliance and automotive applications.	108,000	Land and buildings: leased
ASE Electronics	Kaohsiung, ROC	August 2006	Facilities for the design and production of interconnect materials such as substrates used in the packaging of semiconductors.	566,000	Land: leased Buildings: owned and leased
ASESH AT	Shanghai, China	Acquired in January 2007	An integrated packaging and testing facility that specializes in semiconductors for communications and consumer applications.	1,950,000	Land: leased Buildings: owned
ASEN	Suzhou, China	Acquired in September 2007	An integrated packaging and testing facility that specializes in communication applications.	451,000	Land: leased Buildings: owned
ASEWH	Shandong, China	Acquired in May 2008	An integrated packaging and testing facility that specializes in semiconductors for communications, computing and consumer applications.	759,000	Land: leased Buildings: owned
ASEKS	Kunshan, China	July 2010	An integrated packaging and testing facility that specializes in semiconductors for communications and consumer applications.	2,310,000	Land: leased Buildings: owned
Wuxi Tongzhi	Wuxi, China	Acquired in May 2013	An integrated packaging and testing facility that specializes in semiconductors for MP3, Vehicle, household appliance and communications applications.	78,000	Land and buildings: leased
Universal Scientific	Nantou, ROC	Acquired in February 2010	Manufacture and marketing of electronic components, accessories and related products.	182,000	Land: owned Buildings: owned and leased

Table of Contents

<b>Facility</b>	<b>Location</b>	<b>Commencement of Operation</b>	<b>Primary Use</b>	<b>Approximate Floor Space (in sq. ft.)</b>	<b>Owned or Leased</b>
USI Mexico	Guadalajara, Mexico	Acquired in February 2010	Manufacturing site, which offer motherboard manufacture and system assembly.	384,000	Land: owned Buildings: owned
USISZ	Shenzhen, China	Acquired in February 2010	Manufacturing site, design, manufacture and marketing of motherboards, electronic components, accessories and related products in China.	683,000	Land: leased Buildings: owned
Universal Scientific Shanghai	Shanghai, China	Acquired in February 2010	Manufacturing site, design, manufacture and marketing of motherboards, electronic components, accessories and related products in China.	1,912,000	Land: leased Buildings: owned and leased
UGKS	Kunshan, China	August 2011	Manufacturing site, design, manufacture and marketing of motherboards, electronic components, accessories and related products in China.	889,000	Land: leased Buildings: leased
UGTW	Nantou, ROC	February 2010	Design, manufacture and marketing of electronic components, accessories and related products, and provide related research and development services.	480,000	Land: owned Buildings: owned and leased
UGJQ	Shanghai, China	Established in September 2013	Design, manufacture and marketing of motherboards, electronic components, accessories and related products in China.	647,000	Land: leased Buildings: leased

Our major leased property in Kaohsiung consists primarily of leases of land in the Kaohsiung Nantze Export Processing Zone between ASE Inc. and ASE Test Taiwan, as the lessees, and the Export Processing Zones Administration (the “EPZA”), under the Ministry of Economic Affairs. The leases have ten-year or twenty-year terms that will expire through June 2035. No sublease or lending of the land is allowed. The EPZA has the right to adjust the rental price in the event the government revalues the land. The leases are typically renewable with three-month notice prior to the termination date.

ASE Inc. Kaohsiung Facility

On December 20, 2013, the Kaohsiung Environmental Protection Bureau imposed a fine of NT\$102.0 million (“the Administrative Fine”) upon us for the violation of the Water Pollution Control Act. We filed an administrative appeal to nullify the Administrative Fine, which was dismissed by the Kaohsiung City Government. In August 2014, we appealed to the Kaohsiung High Administrative Court seeking to (i) revoke Kaohsiung City Government’s decision, (ii) lift the administrative penalty imposed on us and (iii) demand a refund of the Administrative Fine. On March 22, 2016, the Kaohsiung High Administrative Court revoked Kaohsiung City Government’s decision and lifted the administrative penalty. Our demand for a refund of the Administrative Fine was dismissed. We appealed to the Supreme Administrative Court on April 14, 2016 against the Kaohsiung High Administrative Court’s unfavorable ruling in dismissing a refund. On June 8, 2017, the Supreme Administrative Court overturned Kaohsiung High Administrative Court’s decision and ordered Kaohsiung Environmental Protection Bureau to refund the Administrative Fine paid by us.

## Table of Contents

In connection with the same alleged violations at our K7 plant, in October 2014, the Kaohsiung District Court ruled that we were in violation of the ROC Waste Disposal Act and imposed on us a criminal penalty of NT\$3.0 million. We appealed the case to the Taiwan High Court Kaohsiung District Branch in November 2014. On September 29, 2015, the Taiwan High Court Kaohsiung District Branch overturned the decision made by Kaohsiung District Court and found us not guilty and repealed the criminal penalty imposed on us. The verdict was final and not appealable. For additional details of these administrative actions and judicial proceedings related to our K7 Plant see “—Environmental Matters” and “Item 8. Financial Information—Consolidated Statements and Other Financial Information—Legal Proceedings.”

Any future suspension of operations at K7 Plant or our other facilities may adversely affect our business, financial condition, results of operations and cash flows. See “Item 3. Key Information—Risk Factors—Risks Relating to Our Business—Any environmental claims or failure to comply with any present or future environmental regulations, as well as any fire or other industrial accident, may require us to spend additional funds and may materially and adversely affect our financial condition and results of operations.”

We currently do not have plans for significant expansion, but will re-evaluate our need for future expansion based on market condition and future demand requirements to meet our expected future growth. For information on the aggregate capacity of our facilities we operate, see “—Business Overview—Equipment.”

### Item 4A. Unresolved Staff Comments

None.

### Item 5. Operating and Financial Review and Prospects

## OPERATING RESULTS AND TREND INFORMATION

*The following discussion of our business, financial condition and results of operations should be read in conjunction with our consolidated financial statements, which are included elsewhere in this annual report. This discussion contains forward-looking statements that reflect our current views with respect to future events and financial performance. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of any number of factors, such as those set forth under “Item 3. Key Information—Risk Factors” and elsewhere in this annual report. See “Special Note Regarding Forward-Looking Statements.”*

## Overview

We offer a broad range of semiconductor packaging and testing services and we also offer electronic manufacturing services since our acquisition of a controlling interest in Universal Scientific in February 2010. In addition to offering each service separately, we also offer turnkey services, which includes integrated packaging, testing and direct shipment of semiconductors to end users designated by our customers and solution-based proactive original design manufacturing, with our customers. In addition, we started generating revenues from our real estate business since 2010. Our operating revenues increased from NT\$283,302.5 million in 2015 to NT\$274,884.1 million in 2016 and NT\$290,441.2 million (US\$9,799.0 million) in 2017.

Discussed below are several factors that have had a significant influence on our financial results in recent years.

## Pricing and Revenue Mix

We price our services taking into account the actual costs involved in providing these services, with reference to prevailing market prices. The majority of our prices and revenues are denominated in U.S. dollars. Any significant fluctuation in exchange rates, especially between NT dollars and U.S. dollars, will affect our costs and, in turn, our revenues.

In the case of semiconductor packaging, the cost of the silicon die, typically the most costly component of the packaged semiconductor, is usually not reflected in our costs (or revenues) since it is generally supplied by our customers on a consignment basis.

## Table of Contents

The semiconductor industry is characterized by a general trend toward declining prices for products and services of a given technology over time. In addition, during periods of intense competition and adverse conditions in the semiconductor industry, the pace of this decline may be more rapid than in other years. The average selling prices of our packaging and testing services have experienced sharp declines during such periods as a result of intense price competition from other market participants that attempt to maintain high capacity utilization levels in the face of reduced demand.

Declines in average selling prices have been partially offset historically by changes in our revenue mix, and typically the selling price is largely dependable on the complexity of the services. In particular, revenues derived from more advanced package types, such as flip-chip BGA, higher density packages with finer lead-to-lead spacing, or pitch, and testing of more complex, high-performance semiconductors have increased as a percentage of total revenues. We intend to continue to focus on package types such as bumping, flip-chip BGA and SiP, developing and offering new technologies in packaging and testing services and expanding our capacity to achieve economies of scale, as well as improving production efficiencies for older technologies, in order to mitigate the effects of declining average selling prices on our profitability.

Our profitability for a specific package type does not depend linearly on its average selling price. Some of our more traditional package types, which typically have low average selling prices, may well command steadier and sometimes higher margins than more advanced package types with higher average selling prices.

## High Fixed Costs

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 especially from our acquisitions of packaging and testing equipment and facilities. Our profitability depends in part not only on absolute pricing levels for our products/services, but also on utilization rates on equipment, commonly referred to as “capacity utilization rates.” In particular, increases or decreases in our capacity utilization rates could have a significant effect on gross margins since the unit cost of our products and/or services generally decreases as fixed costs are allocated over a larger number of units. The capacity utilization rates of the machinery and equipment installed at our production facilities typically depend on factors such as the volume and variety of products, the efficiency of our operations in terms of the loading and adjustment of machinery and equipment for different products, the complexity of the different products to be packaged or tested, the amount of time set aside for the maintenance and repair of the machinery and equipment, and the experience and schedule of work shifts of operators.

In 2015, 2016 and 2017, our depreciation, amortization and rental expense included in operating costs as a percentage of operating revenues was 10.0%, 10.3% and 9.5%, respectively. The decrease in depreciation, amortization and rental expense as a percentage of operating revenues in 2017 compared to 2016 was primarily a result of an increase in our electronic manufacturing services revenues. We begin depreciating our equipment when the machinery is placed into service. There may sometimes be a time lag between when our equipment is available for use and when it achieves

high levels of utilization. In periods of depressed industry conditions, such as the fourth quarter of 2008, we experienced lower than expected demand from customers, resulting in an increase in depreciation relative to operating revenues. In particular, the capacity utilization rates for our testing equipment are more severely affected during an industry downturn as a result of a decrease in outsourcing demand from integrated device manufacturers, which typically maintain larger in-house testing capacity than in-house packaging capacity.

In addition to purchasing testers, we also lease a portion of our testers, which we believe allows us to better manage our capacity utilization rates and cash flow. Since leased testers can be replaced with more advanced testers upon the expiration of the lease, we believe that these operating leases have enabled us to improve our capacity utilization rates by allowing us to better align our capacity with changes in equipment technology and the needs of our customers. For more information about our testers, including the number of testers under lease, see “Item 4. Information on the Company—Business Overview—Equipment—Testing.”

#### Raw Material Costs

Substantially all of our raw material costs are accounted for by packaging, the production of interconnect materials and electronic manufacturing services. In particular, our electronic manufacturing services acquired in 2010 require more significant quantities of raw materials than our packaging and production of interconnect materials. In 2017, raw material costs accounted for 79.3% of our operating revenues from electronic manufacturing services, and our revenues generated from electronic manufacturing services contributed to 46.1% of our operating revenues. In 2015, 2016 and 2017, raw material cost as a percentage of our operating revenues was 50.0%, 45.5% and 49.2%, respectively.

## Table of Contents

We have developed copper wire to gradually replace gold wire in the packaging processes in order to benefit from the lower material cost of copper. However, gold wire is still and will continue to be one of the principal raw materials for us in our packaging processes. It may be difficult for us to adjust our average selling prices to account for fluctuations in the price of gold. Thus we expect our raw material costs to continue to be affected by fluctuations in the price of gold.

### Recent Accounting Pronouncements

#### Adopted standards for current period

In the current year, we have applied the following new, revised or amended standards and interpretations that have been issued and effective: Amendments to IFRSs *Annual Improvements to IFRSs: 2014-2016 Cycle*, Amendments to IAS 7 Disclosure Initiative and Amendments to IAS 12 *Recognition of Deferred Tax Assets for Unrealized Losses*. Except for the adoption of Amendments to IAS 7 which can be referred to note 34e to our consolidated financial statements included in this annual report, the adoption of aforementioned standards or interpretations did not have a significant effect on our accounting policies. Please refer to note 3 to our consolidated financial statements included in this annual report for more information.

#### Standards not yet adopted

Among the new, revised or amended standards and interpretations that have been issued but are not yet effective, except for the adoption of IFRS 9, IFRS 15 and IFRS 16, we believe that the adoption of the following standards and interpretations will not have a material effect on our accounting policies: Amendments to IFRSs *Annual Improvements to IFRSs: 2015-2017 Cycle*, Amendments to IFRS 2 *Classification and Measurement of Share-based Payment Transactions*, IFRS 9 *Financial Instruments*, Amendments to IFRS 9 and IFRS 7 *Mandatory Effective Date of IFRS 9 and Transition Disclosures*, Amendments to IFRS 9 *Prepayment Features with Negative Compensation*, Amendments to IFRS 10 and IAS 28 *Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*, IFRS 15 *Revenue from Contracts with Customers*, Amendments to IFRS 15 *Clarifications to IFRS15 Revenue from Contracts with Customers*, IFRS 16 *Leases*, Amendments to IAS 19 *Plan Amendment, Curtailment or Settlement*, Amendments to IAS 40 *Transfers of investment property*, IFRIC 22 *Foreign Currency Transactions and Advance Consideration*, Amendments to IAS 28 *Long-term Interests in Associate and Joint Venture* and IFRIC 23 *Uncertainty over Income Tax Treatments*. Please refer to note 3 to our consolidated financial statements included in this annual report for the impact on our financial position and operating results as a result of the initial adoption of the following standards and interpretations: IFRS 9 *Financial Instruments*, IFRS 15 *Revenue from Contracts with Customers*, IFRS 16 *Leases* and Amendments to IAS 19 *Plan Amendment, Curtailment or Settlement*.



***IFRS 15 “Revenue from Contracts with Customers” and related amendments***

IFRS 15 establishes principles for recognizing revenue that apply to all contracts with customers, and will supersede IAS 18 “Revenue”, IAS 11 “Construction Contracts” and a number of revenue-related interpretations.

## Table of Contents

Presented below is the process we have utilized for the adoption of IFRS 15 and related amendments and the significant implementation matters addressed:

The Group established a global cross-functional project management implementation team to assess all potential impacts of this standard.

The Group is reviewing current accounting policies and practices in each reporting segment to identify potential differences that would result from the application of this standard.

Customers and contracts were identified.

Evaluation of the contract provisions and the comparison of historical accounting policies and practices to the requirements of the new standard is in process, including the related qualitative disclosures regarding the potential impact of the effects of the accounting policies we expect to apply and a comparison to our current revenue recognition policies.

## Critical Accounting Policies and Estimates

Preparation of our consolidated financial statements requires us to make estimates and judgments in applying our critical accounting policies that have a significant impact on the results we report in our consolidated financial statements. Our principal accounting policies and critical accounting judgments and key sources of estimation uncertainty are set forth in detail in note 4 and note 5, respectively, to our consolidated financial statements included in this annual report. We continually evaluate these estimates and assumptions. Actual results may differ from these estimates under different assumptions and conditions. Significant accounting policies are summarized as follows.

**Revenue Recognition.** Revenue is measured at the fair value of the consideration received or receivable take into account of estimated customer returns, rebates and other similar allowances. Revenue from the sale of goods and real estate properties is recognized when the goods and real estate properties are delivered and titles have passed, at the time all the following conditions are satisfied:

we have transferred to the buyer the significant risks and rewards of ownership of the goods and real estate properties;

we retain neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods and real estate properties sold;

- the amount of revenue can be reliably measured;
- it is probable that the economic benefits associated with the transaction will flow to us; and
- the costs incurred or to be incurred in respect of the transaction can be reliably measured.

Service income is recognized when services are rendered.

Table of Contents

Our customers bear the title and risk of loss for those bare semiconductor wafers that we receive and package into finished semiconductors and/or those packaged semiconductors that we receive and test for performance specifications. Accordingly, the cost of customer-supplied semiconductor materials is not included in our consolidated financial statements.

A sales discount and return allowance is recognized in the period during which the sale is recognized, and is estimated based on historical experience, the management's judgment and relevant factors.

***Inventories.*** Inventories are recorded at cost when acquired and stated at the lower of cost or net realizable values. Inventories are written down to net realizable value item by item, except for those that may be appropriate to group items of similar or related inventories. Materials received from customers for processing, mainly of semiconductor wafers, are excluded from inventories, as title and risk of loss remains with the customers. Net realizable value is the estimated selling prices of inventories less all estimated costs of completion and estimated costs necessary to make the sale. An allowance for loss on decline in market value and obsolescence is provided based on the difference between the cost of inventory and the estimated market value based upon assumptions about future demand and market conditions. Due to rapid technology advancements, we estimate the net realizable value of inventory for obsolete and unmarketable items at the balance sheet date and then write down the cost of inventories to net realizable value.

***Realization of Deferred Tax Assets.*** Tax benefits arising from deductible temporary differences, unused tax credits and unused loss carry-forwards are recognized as deferred tax assets to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized. We have considered future taxable income and ongoing prudent and feasible tax planning strategies in assessing the deferred tax assets. The carrying amounts of deferred tax assets are reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of deferred tax assets to be utilized. A previously unrecognized deferred tax asset is also reviewed at each balance sheet date and recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be utilized. The realizability of deferred tax assets mainly depends on whether sufficient future profits or taxable temporary differences will be available. In cases where the actual future profits generated are less than expected, a material reversal of deferred tax assets may arise, which would be recognized in profit or loss for the period in which such a reversal takes place.

***Impairment of Tangible and Intangible Assets Other than Goodwill.*** At each balance sheet date, we review the carrying amounts of the tangible and intangible assets, excluding goodwill, to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. Recoverable amount is the higher of fair value less costs to sell and value in use. If the recoverable amount of an asset or cash-generating unit is estimated to be less than its carrying amount, the carrying amount of the asset or cash-generating unit is reduced to its recoverable amount. The process of evaluating the potential impairment of tangible and intangible assets other than goodwill requires significant judgment. We are required to make subjective judgments in determining the independent cash flows, useful lives, expected future revenue and expenses related to a specific asset group, taking its usage patterns and the nature of the semiconductor industry into consideration. Any changes in our estimates caused by changing economic conditions or business strategies could result in significant impairment charges in future periods.

In 2015, 2016 and 2017, we recognized impairment losses of NT\$258.1 million, NT\$888.2 million and NT\$289.6 million (US\$9.8 million), respectively, on property, plant and equipment. See note 14 to our consolidated financial statements included in this annual report.

***Business Combinations and Acquisition of Material Associate.*** When we acquire businesses, goodwill is measured as the excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. The allocation of the purchase price requires management to make significant estimates in determining the fair values of assets acquired and liabilities assumed, especially with respect to intangible assets. These estimates are based on historical experience, information obtained from the management of the acquired companies and independent external service providers' reports. These estimates can include, but are not limited to, the cash flows that an asset is expected to generate in the future, the appropriate weighted-average cost of capital, and the synergistic benefits expected to be derived from the acquired business. These estimates are inherently uncertain and unpredictable. In addition, unanticipated events and circumstances may occur, which may affect the accuracy or validity of such estimates.

Table of Contents

For the associate accounted for using the equity method, goodwill is included within the carrying amount of the investment as of each investment date as the excess of cost of investments over the share acquired of the net fair value of the associate's identifiable assets acquired and the liabilities assumed at the respective investment dates. It involves critical accounting judgment and estimates when determining aforementioned fair values. We engaged independent external appraiser to identify and evaluate the associate's identifiable tangible assets, intangible assets and liabilities. The scope of such evaluation includes assumptions as current replacement cost of tangible assets, the categories of intangible assets and their expected economic benefits, growth rates for operating revenue and discount rates used in cash flow analysis. The amounts of differences between fair value of identified tangible and intangible assets and the carrying amount at each respective investment dates are depreciated or amortized over their remaining useful lives or expected future economic benefit lives and recognized immediately in profit or loss.

For example, we acquired shareholdings of a subsidiary and its associates in 2016 and identified the differences between the cost of the investment and our share of the net fair value of a subsidiary and its associates' identifiable assets and liabilities in 2017. We retrospectively adjusted the comparative financial statement for the year ended December 31, 2016. See note 13 to our consolidated financial statements included in this annual report.

**Goodwill.** Goodwill is allocated to each cash-generating unit and tested for impairment annually, and we test for impairment more frequently if an event occurs or circumstances change that would indicate that the cash-generating unit may be impaired. Determining whether goodwill is impaired requires an estimation of the recoverable amounts of the cash-generating units to which goodwill has been allocated. Recoverable amounts are assessed by value in use which requires management to estimate the future cash flows expected to arise from cash-generating units and suitable discount rates in order to calculate its present value. When the actual future cash flows are less than expected, a material impairment loss may arise. In conducting the future cash flow valuation, we make assumptions about future operating cash flows, the discount rate used to determine present value of future cash flows, and capital expenditures. Future operating cash flows assumptions include sales growth assumptions, which are based on our historical trends and industry trends, and gross margin and operating expense growth assumptions, which are based on the historical relationship of those measures compared to sales and certain cost cutting initiatives. An impairment charge is incurred to the extent the carrying amount exceeds the recoverable amount. We did not recognize any impairment loss in 2015 and 2016. In 2017, we recognized an impairment loss of NT\$425.1 million (US\$14.3 million) due to the lower-than-expected actual revenue growth of cash flows from segments other than packaging segment, testing segment and EMS segment, which led to the recoverable amount lower than the carrying amount. As of December 31, 2015, 2016 and 2017, we had goodwill of NT\$10,506.5 million, NT\$10,490.3 million and NT\$9,934.5 million (US\$335.2 million), respectively. Our conclusion could, however, change in the future if actual results differ from our estimates and judgments under different assumptions and conditions. See note 16 to our consolidated financial statements included in this annual report.

**Valuation of Investments.** We hold investments in the shareholdings of public and non-public entities. We evaluate these investments periodically for impairment based on market prices, if available, the financial condition of the investees and economic conditions in the industry and estimate of future cash inflows from disposal (net of transaction cost). These assessments usually require a significant amount of judgment, as a significant decline in the market price may be a short-term drop and may not be the best indicator of impairment. Whenever triggering events or changes in circumstances indicate that an investment may be impaired and carrying amount may not be recoverable, we measure the impairment based on the market prices, if available, or using market approach based on the financial result of the

investments and estimate of future cash inflows from disposal (net of transaction cost). Several of the investments held by us are recognized as the equity method investments or available-for-sale financial assets. Any significant decline in the estimated future cash flows of the investments or financial assets could affect the value of the investment and indicate that an impairment charge may occur. In 2015, 2016 and 2017, we recognized impairment losses of nil, NT\$91.9 million and NT\$50.2 million (US\$1.7 million), respectively, on our investments. See note 24 to our consolidated financial statements included in this annual report.

Table of Contents**Results of Operations**

The following table sets forth, for the periods indicated, financial data from our consolidated statements of comprehensive income, expressed as a percentage of operating revenues.

	Year Ended December 31,			
	2015	2016	(Retrospectively 2017 Adjusted)	
Operating revenues	100.0%	100.0	%	100.0%
Packaging	41.2	45.6		43.5
Testing	8.9	9.8		9.0
Electronic manufacturing services	48.8	42.0		46.1
Others	1.1	2.6		1.4
Operating costs	(82.3 )	(80.7 )	)	(81.8 )
Gross profit	17.7	19.3		18.2
Operating expenses	(8.9 )	(9.6 )	)	(9.5 )
Other operating income and expenses, net	(0.1 )	(0.3 )	)	0.0
Profit from operations	8.7	9.4		8.7
Non-operating expense, net <sup>(1)</sup>	0.1	0.8		2.0
Profit before income tax	8.8	10.2		10.7
Income tax expense	(1.5 )	(2.0 )	)	(2.3 )
Profit for the year	7.3 %	8.2	%	8.4 %
Attributable to				
Owners of the Company	7.0 %	7.8	%	7.8 %
Non-controlling interests	0.3	0.4		0.6
	7.3 %	8.2	%	8.4 %
Other comprehensive income, net of income tax	0.0	(2.9 )	)	(1.6 )
Total comprehensive income for the year	7.3 %	5.3	%	6.8 %
Attributable to				
Owners of the Company	7.0 %	5.1	%	6.4 %
Non-controlling interests	0.3	0.2		0.4
	7.3 %	5.3	%	6.8 %

(1) We have completed the identification of difference between the cost of the investment and our share of the net fair value of a subsidiary and its associates' identifiable assets and liabilities in 2017. Therefore, we retrospectively adjusted the comparative financial statement for the year ended December 31, 2016, which differs from the results included in our annual report on Form 20-F for the year ended December 31, 2016. The retrospective adjustments resulted in a decrease of NT\$8.3 million (US\$0.3 million) to the investments accounted for using the equity method, a decrease of NT\$68.6 million (US\$2.3 million) to the goodwill and an increase of NT\$56.3 million (US\$1.9 million) to the other intangible assets on the consolidated balance sheet as of December 31, 2016, as well as a decrease of NT\$8.3 million (US\$0.3 million) to share of the profit of associates, an increase of NT\$7.0



million (US\$0.2 million) to operating cost and an increase of NT\$41.1 million (US\$1.4 million) to operating expense on the consolidated statement of comprehensive income for the year ended December 31, 2016. See notes 13 and 28 to our audited consolidated financial statement included in this annual report for more information.

The following table sets forth, for the periods indicated, the gross margins for our packaging, testing services and electronic manufacturing services and our total gross margin. Gross margin is calculated by dividing gross profits by operating revenues.

	Year Ended December		
	2015	2016	2017
	(percentage of operating revenues)		
Gross profit			
Packaging	26.0%	22.8%	22.8%
Testing	35.8	36.9	35.6
Electronic manufacturing services	6.8	9.7	10.1
Overall	17.7%	19.3%	18.2%

Table of Contents

The following table sets forth, for the periods indicated, a breakdown of our total operating costs and operating expenses, expressed as a percentage of operating revenues.

	Year Ended December 31, 2015 2016 2017 (percentage of operating revenues)		
Operating costs			
Raw materials	50.0%	45.5%	49.2%
Labor	12.3	13.0	12.4
Depreciation, amortization and rental expense	10.0	10.3	9.5
Others	10.0	11.9	10.7
Total operating costs	82.3%	80.7%	81.8%
Operating expenses			
Selling	1.3 %	1.3 %	1.1 %
General and administrative	3.8	4.2	4.3
Research and development	3.8	4.1	4.1
Total operating expenses	8.9 %	9.6 %	9.5 %

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

**Operating Revenues.** Operating revenues increased 5.7% to NT\$290,441.2 million (US\$9,799.0 million) in 2017 from NT\$274,884.1 million in 2016, primarily due to an increase in revenue from our electronic manufacturing services business. Packaging revenues increased 0.8% to NT\$126,225.1 million (US\$4,258.6 million) in 2017 from NT\$125,282.8 million in 2016, primarily due to an increase in demand of Bumping, Flip Chip, WLP & SiP products. Testing revenues decreased 3.2% to NT\$26,157.3 million (US\$882.5 million) in 2017 from NT\$27,031.8 million in 2016, primarily due to the soft demand in end-application market. Revenues from our electronic manufacturing services business increased 16.1% to NT\$133,948.0 million (US\$4,519.2 million) in 2017 from NT\$115,395.1 million in 2016, primarily due to an increase in outsourced orders for consumer products and communications products.

**Gross Profit.** Gross profit decreased 0.9% to NT\$52,732.3 million (US\$1,779.1 million) in 2017 from NT\$53,187.2 million (retrospectively adjusted) in 2016. Our gross profit as a percentage of operating revenues, or gross margin, was 18.2% in 2017 compared to 19.3% in 2016. The decrease was primarily due to an increase in our electronic manufacturing services business, which had a lower gross margin. Raw material costs in 2017 were NT\$142,934.4 million (US\$4,822.3 million) compared to NT\$125,133.8 million in 2016. As a percentage of operating revenues, raw material costs increased to 49.2% in 2017 from 45.5% in 2016 primarily due to an increase in orders in our electronic manufacturing services business, which had relatively higher raw material costs compared to our other businesses. Labor cost in 2017 was NT\$35,978.4 million (US\$1,213.8 million) compared to NT\$35,588.5 million in 2016. As a percentage of operating revenues, labor cost decreased to 12.4% in 2017 from 13.0% in 2016 primarily due to the growth of our operating revenues. Depreciation, amortization and rental expenses were NT\$27,703.1 million (US\$934.7 million) in 2017 compared to NT\$28,124.6 million (retrospectively adjusted) in 2016. As a percentage of

operating revenues, depreciation, amortization and rental expenses decreased to 9.5% in 2017 from 10.3% in 2016. Our gross margin for our packaging business was 22.8% in both 2017 and 2016. Our gross margin for our testing business decreased to 35.6% in 2017 from 36.9% in 2016 primarily due to the decline of our testing revenues. Our gross margin for our electronic manufacturing services business increased to 10.1% in 2017 from 9.7% in 2016 primarily due to a decrease in the sale of products with lower gross margins.

***Profit from Operations.*** Profit from operations decreased 2.1% to NT\$25,327.2 million (US\$854.5 million) in 2017 compared to NT\$25,860.1 million (retrospectively adjusted) in 2016. Our profit from operations as a percentage of operating revenues, or operating margin, decreased to 8.7% in 2017 from 9.4% in 2016 primarily due to a decrease in gross margin. Operating expenses increased 3.7% to NT\$27,513.7 million (US\$928.3 million) in 2017 compared to NT\$26,526.8 million (retrospectively adjusted) in 2016. The increase in operating expenses was primarily due to an increase in general and administrative expense as well as research and development expense. General and administrative expense increased 6.8% to NT\$12,458.1 million (US\$420.3 million) in 2017 from NT\$11,662.1 million in 2016, primarily due to an increase in salary expenses in connection with higher employee and directors bonus accrued, which were caused by our higher net profit and an increase in professional fee. General and administrative expense as a percentage of our operating revenues was 4.3% in 2017, compared to 4.2% in 2016. Research and development expense increased 3.1% to NT\$11,746.6 million (US\$396.3 million), accounting for 4.0% of operating revenues in 2017, compared to NT\$11,391.1 million, accounting for 4.1% of operating revenues in 2016. This increase in the research and development expense was primarily due to an increase in salary expenses. Selling expense decreased 4.7% to NT\$3,309.0 million (US\$111.6 million) in 2017 from NT\$3,473.6 million (retrospectively adjusted) in 2016. This decrease was primarily due to a decrease in salary expenses and amortization expenses in connection with intangible assets fully amortized. Selling expense as a percentage of operating revenues was 1.1% in 2017, compared to 1.3% in 2016. We had a net other operating income of NT\$108.6 million (US\$3.7 million) in 2017 compared to a net other operating expense of NT\$800.3 million in 2016. The increase in net other operating income was primarily due to a gain of NT\$367.1 million (US\$12.4 million) from the disposal of property, plant and equipment and other assets.

Table of Contents

**Non-Operating Income and Expenses.** We had a net non-operating income of NT\$5,693.5 million (US\$192.1 million) in 2017 compared to a net non-operating income of NT\$2,108.6 million (retrospectively adjusted) in 2016. This increase was primarily due to an increase in non-operating income due to a gain of NT\$5,589.5 million (US\$188.6 million) from the disposal of subsidiaries, partially offset by a decrease in non-operating income due to the change in the net loss on valuation of financial assets and liabilities and net foreign exchange gain which resulted in a decrease in net gain from NT\$2,375.9 million in 2016 to NT\$718.7 million (US\$24.2 million) in 2017.

**Net Profit.** Net profit, excluding non-controlling interests, increased 7.0% to NT\$22,819.1 million (US\$769.9 million) in 2017 compared to NT\$21,324.4 million (retrospectively adjusted) in 2016. Our diluted earnings per ADS increased to NT\$12.98 (US\$0.44) in 2017 compared to diluted earnings per ADS of NT\$11.64 (retrospectively adjusted) in 2016. Our income tax expense increased 21.0% to NT\$6,523.6 million (US\$220.1 million) in 2017 compared to NT\$5,390.8 million in 2016, primarily due to an increase in profit before income tax and an increase in income tax on unappropriated earnings.

Year ended December 31, 2016 Compared to Year Ended December 31, 2015

**Operating Revenues.** Operating revenues decreased 3.0% to NT\$274,884.1 million in 2016 from NT\$283,302.5 million in 2015, primarily due to a decrease in revenues from our electronic manufacturing services business. Packaging revenues increased 7.4% to NT\$125,282.8 million in 2016 from NT\$116,607.3 million in 2015, primarily due to an increase in demand for our Bumping, Flip Chip, WLP & Sip and IC wirebonding products. Testing revenues increased 7.3% to NT\$27,031.8 million in 2016 from NT\$25,191.9 million in 2015, primarily due to an increase in sales volume of our testing business. Revenues from our electronic manufacturing services business decreased 16.5% to NT\$115,395.1 million in 2016 from NT\$138,242.1 million in 2015, primarily due to a decrease in the outsourced orders for communications and consumer products.

**Gross Profit.** Gross profit increased 6.1% to NT\$53,187.2 million (retrospectively adjusted) in 2016 from NT\$50,135.2 million in 2015. Our gross profit as a percentage of operating revenues, or gross margin, was 19.3% (retrospectively adjusted) in 2016 compared to 17.7% in 2015. The increase was primarily due to a decline of our electronic manufacturing services business with a lower gross margin. Raw material costs in 2016 were NT\$125,133.8 million compared to NT\$141,778.8 million in 2015. As a percentage of operating revenues, raw material costs decreased to 45.5% in 2016 from 50.0% in 2015 primarily due to a decrease in orders in our electronic manufacturing services business, which required relatively higher raw material costs compared to our other businesses. Labor cost in 2016 was NT\$35,588.5 million compared to NT\$34,720.4 million in 2015. As a percentage of operating revenues, labor cost increased to 13.0% in 2016 from 12.3% in 2015 primarily due to the decline of our operating revenues. Depreciation, amortization and rental expenses were NT\$28,124.6 million (retrospectively adjusted) in 2016 compared to NT\$28,191.8 million in 2015. As a percentage of operating revenues, depreciation, amortization and rental expenses increased to 10.2% (retrospectively adjusted) in 2016 from 10.0% in 2015. Our gross margin for our packaging business decreased to 22.8% in 2016 from 26.0% in 2015, primarily due to a decrease in the sale of products with higher gross margins. Our gross margin for our testing business increased to 36.9% in 2016 from 35.8%

in 2015 primarily due to a decrease in depreciation expenses as a percentage of testing revenues. Our gross margin for our electronic manufacturing services business increased to 9.7% in 2016 from 6.8% in 2015 primarily due to a decrease in the sale of products with lower gross margins.

***Profit from Operations.*** Profit from operations increased 5.0% to NT\$25,860.1 million (retrospectively adjusted) in 2016 compared to NT\$24,633.1 million in 2015. Our profit from operations as a percentage of operating revenues, or operating margin, increased to 9.4% (retrospectively adjusted) in 2016 from 8.7% in 2015 primarily due to an increase in gross margin. Operating expenses increased 5.1% to NT\$26,526.8 million (retrospectively adjusted) in 2016 compared to NT\$25,250.6 million in 2015. The increase in operating expenses was primarily due to an increase in general and administrative expense, as well as research and development expense. General and administrative expense increased 8.7% to NT\$11,662.1 million in 2016 from NT\$10,724.6 million in 2015, primarily due to an increase in our professional fees incurred in relation to various investment strategies and an increase in salary expenses in connection with the cost related to stock options granted in the fourth quarter of 2015 and recognized in 2016. General and administrative expense as a percentage of our operating revenues was 4.2% in 2016, compared to 3.8% in 2015. Research and development expense increased 4.1% to NT\$11,391.1 million, accounting for 4.1% of operating revenues in 2016, compared to NT\$10,937.5 million, accounting for 3.8% of operating revenues in 2015. This increase in the research and development expense was primarily due to an increase in salary expenses in relation to stock options granted in the fourth quarter of 2015 and recognized in 2016. Selling expense decreased 3.2% (retrospectively adjusted) to NT\$3,473.6 million (retrospectively adjusted) in 2016 from NT\$3,588.5 million in 2015. This decrease was primarily due to a decrease in amortization expenses in connection with intangible assets acquired in prior mergers. Selling expense as a percentage of operating revenues was 1.3% in both 2016 and 2015. We had a net other operating expense of NT\$800.3 million in 2016 compared to a net other operating expense of NT\$251.5 million in 2015. The increase in net other operating expense was primarily due to an increase in impairment loss on property, plant and equipment.

Table of Contents

**Non-Operating Expense, Net.** We had a net non-operating income of NT\$2,108.6 million (retrospectively adjusted) in 2016 compared to a net non-operating income of NT\$378.7 million in 2015. This increase was primarily due to (i) an increase in non-operating income due to the change in the net loss on valuation of financial assets and liabilities and net foreign exchange loss which resulted in an increase in net gain from NT\$1,759.6 million in 2015 to NT\$2,375.9 million in 2016 and (ii) an increase in non-operating income due to the increase in the income earned from equity method investments from the profit of NT\$126.3 million in 2015 to the profit of NT\$1,503.9 million (retrospectively adjusted) in 2016, partially offset by a decrease in non-operating income due to a decrease in dividends income from NT\$397.0 million in 2015 to NT\$26.4 million in 2016.

**Net Profit.** Net profit, excluding non-controlling interests, increased 8.1% (retrospectively adjusted) to NT\$21,324.4 million (retrospectively adjusted) in 2016 compared to NT\$19,732.1 million in 2015. Our diluted earnings per ADS decreased to NT\$11.64 (retrospectively adjusted) in 2016 compared to diluted earnings per ADS of NT\$12.38 in 2015. Our income tax expense increased 25% to NT\$5,390.8 million in 2016 compared to NT\$4,311.1 million in 2015, primarily due to an increase in income tax on undistributed earnings and an increase in income tax of our real estate business which generated more operating revenues in 2016.

Quarterly Operating Revenues, Gross Profit and Gross Margin

The following table sets forth our unaudited consolidated operating revenues, gross profit and gross margin for the quarterly periods indicated. The unaudited quarterly results reflect all adjustments, consisting of normal recurring adjustments that, in the opinion of management, are necessary for a fair presentation of the amounts, on a basis consistent with the audited consolidated financial statements included elsewhere in this annual report. You should read the following table in conjunction with the audited consolidated financial statements and related notes included elsewhere in this annual report. Our operating revenues, gross profit and gross margin for any quarter are not necessarily indicative of the results for any future period. Our quarterly operating revenues, gross profit and gross margin may fluctuate significantly.

Table of Contents

	Quarter Ended							
	Mar. 31, 2016 NT\$ (in millions)	June 30, 2016 NT\$	Sep. 30, 2016 NT\$	Dec. 31, 2016 NT\$	Mar. 31, 2017 NT\$	June 30, 2017 NT\$	Sep. 30, 2017 NT\$	Dec. 31, 2017 NT\$
Consolidated Operating Revenues								
Packaging	28,036.1	30,177.6	33,448.6	33,620.5	29,806.3	30,493.4	32,880.7	33,044.7
Testing	5,995.3	6,502.1	7,231.5	7,302.9	6,365.0	6,349.8	6,888.7	6,553.8
Electronic manufacturing services	24,748.8	24,845.3	31,174.4	34,626.6	29,354.5	28,210.7	33,097.9	43,284.9
Others	3,590.9	1,075.7	929.2	1,578.6	1,024.9	972.2	1,011.1	1,102.6
Total	62,371.1	62,600.7	72,783.7	77,128.6	66,550.7	66,026.1	73,878.4	83,986.0
Consolidated Gross Profit								
Packaging	5,579.4	6,711.6	7,750.8	8,482.8	6,453.4	6,553.6	7,586.8	8,191.5
Testing	1,971.0	2,395.6	2,809.9	2,804.1	2,127.4	2,173.7	2,604.2	2,398.3
Electronic manufacturing services	1,996.6	2,533.2	3,113.2	3,591.8	3,096.4	3,075.7	3,398.1	3,992.3
Others	1,902.3	612.7	436.4	495.8	298.1	312.5	258.6	211.7
Total	11,449.3	12,253.1	14,110.3	15,374.5	11,975.3	12,115.5	13,847.7	14,793.8
Consolidated Gross Profit (%)								
Packaging	19.9	% 22.2	% 23.2	% 25.2	% 21.7	% 21.5	% 23.1	% 24.8
Testing	32.9	36.8	38.9	38.4	33.4	34.2	37.8	36.6
Electronic manufacturing services	8.1	10.2	10.0	10.4	10.5	10.9	10.3	9.2
Overall	18.4	% 19.6	% 19.4	% 19.9	% 18.0	% 18.3	% 18.7	% 17.6

Our results of operations are affected by seasonality. In general, our first quarter operating revenues have historically decreased over the preceding fourth quarter, primarily due to the combined effects of holidays in the United States, Taiwan and elsewhere in Asia. Moreover, the increase or decrease in operating revenues of a particular quarter as compared with the immediately preceding quarter varies significantly. See “Item 3. Key Information—Risk Factors—Risks Relating to Our Business—Our operating results are subject to significant fluctuations, which could adversely affect the market value of your investment.”

## Exchange Rate Fluctuations

For quantitative and qualitative disclosure of our exposure to foreign currency exchange rate risk, see “Item 11. Quantitative and Qualitative Disclosures about Market Risk—Market Risk—Foreign Currency Exchange Rate Risk.”

## Taxation

The corporate income tax rate in the ROC decreased from 25% to 17%, effective since January 1, 2010. The ROC Statute for Upgrading Industries, which provided various tax incentives including investment tax credits, tax exemptions and tax holidays for companies, expired on December 31, 2009. Under this statute, we had been granted tax holidays covering the portion of our income attributable to eligible machinery and equipment that were procured with cash infusions from our shareholders or after the capitalization of retained earnings through the issuance of stock dividends, and tax credits of 7% for the purchase of qualifying manufacturing equipment. We can continue to enjoy the tax holidays that have been granted to us by the ROC tax authority. On April 16, 2010, the Legislative Yuan of ROC passed the Industrial Innovation Act, effective from January 1, 2010 to December 31, 2019. Under the prevailing Industrial Innovation Act, a profit-seeking enterprise may deduct up to (i) 15% of its research and development expenditures from its income tax payable for the fiscal year in which these expenditures are incurred; or (ii) 10% of its research and development expenditures from its income tax payable for the fiscal year in which these expenditures are incurred or the following two years. However, the deduction may not exceed 30% of the income tax payable for that fiscal year. Under the Alternative Minimum Tax Act (the “AMT Act”) which took effect in January 2006 and was amended in August 2012, when the amount of the regular income tax calculated pursuant to the Income Tax Law of the ROC (the “Income Tax Law”) is below the amount of the alternative minimum tax, or the AMT, a taxpayer is required to pay the difference between the AMT and the said regular income tax, which becomes the AMT payable. Taxable income for calculating the AMT includes most sources of income that are exempted from income tax under various legislations such as tax holidays. However, there are grandfathered treatments for the tax holidays approved by the tax authority before the AMT Act took effect. Under the amended AMT Act, the standard deduction for taxable income that applies to business entities decreased from NT\$2.0 million to NT\$0.5 million and the tax rate that applies to business entities increased from 10% to 12%. The amendment to the AMT Act became effective on January 1, 2013. Under the amendment to the Income Tax Law, which became effective on January 1, 2018, the corporate income tax rate increased from 17% to 20%.



Table of Contents

As of December 31, 2017, we had two five-year tax holidays on income derived from a portion of our operations in Kaohsiung, Taiwan, which will expire through 2018 and 2020, respectively. In addition, some of our subsidiaries, such as ASE Test Taiwan and ASE Electronics, are entitled to certain tax exemptions on income derived from a portion of their respective operations, which will expire through 2018, 2020 and 2022, respectively. The aggregate tax benefits of such exemptions for the years ended December 31, 2015, 2016 and 2017 were NT\$538.0 million, NT\$700.3 million and NT\$623.6 million (US\$21.0 million), respectively. The effect of such tax exemption on basic earnings per share for the year ended December 31, 2015, 2016 and 2017 were NT\$0.07, NT\$0.09 and NT\$0.08 (US\$0.00), respectively.

In addition, since we have facilities located in special export zones such as the Nantze Export Processing Zone in Taiwan, we enjoy exemptions from various import duties, commodity taxes and business taxes on imported machinery, equipment, raw materials and components which are directly used for manufacturing finished goods. We also enjoy exemptions from commodity and business taxes on finished goods exported or sold to others within the zones.

Under the Income Tax Law, after January 1998, all earnings generated in a year which are not distributed to shareholders as dividends in the following year will be assessed a 10% undistributed earnings tax. As a result, if we do not distribute all of our annual earnings as either cash or stock dividends in the following year, these undistributed earnings will be subject to the 10% undistributed earnings tax. Before December 31, 2018, when we declare a dividend out of those undistributed earnings on which the 10% undistributed earnings tax had been paid, up to 5% of such undistributed earnings tax may be credited against the withholding tax imposed on the dividends paid to foreign shareholders. Under the amended Income Tax Law, which became effective on January 1, 2018, the tax rate on unappropriated earnings is reduced from 10% to 5%.

In 2016, our effective income tax rate increased to 19% from 17% in 2015 primarily due to an increase in undistributed earnings tax and an increase in income tax of our real estate business which generated more operating revenues in 2016. In 2017, our effective income tax rate increased to 21% from 19% in 2016 primarily due to an increase in undistributed earnings tax and an increase in income tax of our electronic manufacturing services business which generated more profit in 2017. We believe that our future estimated taxable income will be sufficient to utilize our deferred tax assets recorded as of December 31, 2017.

Our non-ROC subsidiaries are subject to taxation in their respective jurisdiction.

Inflation

We do not believe that inflation in Taiwan or elsewhere has had a material impact on our results of operations.

## LIQUIDITY AND CAPITAL RESOURCES

We have historically been able to satisfy our working capital needs from our cash flow from operations. We have historically funded our capacity expansion from internally generated cash and, to the extent necessary, the issuance of equity securities and borrowings. If adequate funds are not available on satisfactory terms, we may be forced to curtail our expansion plans. Moreover, our ability to meet our working capital needs from cash flow from operations will be affected by the demand for our packaging services, testing services and electronic manufacturing services, which in turn may be affected by several factors. Many of these factors are outside of our control, such as economic downturns and declines in the prices of our services or products caused by a downturn in the industry. See “Item 3. Key Information—Risk Factors—Risks Relating to Our Business—Our operating results are subject to significant fluctuations, which could adversely affect the market value of your investment.” To the extent we do not generate sufficient cash flow from our operations to meet our cash requirements, we will have to rely on external financing.

Table of Contents

Net cash provided by operating activities amounted to NT\$47,430.8 million (US\$1,600.2 million) in 2017 primarily as a result of (i) our operation performance with profit before income tax of NT\$31,020.7 million (US\$ 1,046.6 million) and (ii) our non-cash depreciation and amortization in the amount of NT\$29,205.2 million (US\$985.3 million). Net cash provided by operating activities amounted to NT\$52,107.9 million in 2016 primarily as a result of (i) our operation performance with profit before income tax of NT\$27,968.7 million (retrospectively adjusted) and (ii) our non-cash depreciation and amortization in the amount of NT\$29,470.4 million (retrospectively adjusted). Net cash provided by operating activities amounted to NT\$57,548.3 million in 2015 primarily as a result of (i) our operation performance with profit before income tax of NT\$25,011.8 million and (ii) our non-cash depreciation and amortization in the amount of NT\$29,518.7 million. The decrease in net cash provided by operating activities in 2017 compared to 2016 was primarily due to cash outflows from a decrease in trade payables, partially offset by cash inflows from a decrease in inventories. The decrease in net cash provided by operating activities in 2016 compared to 2015 was primarily due to cash outflows from trade receivables, partially offset by cash inflows from a decrease in inventories.

Net cash used in investing activities amounted to NT\$16,086.2 million (US\$542.7 million) in 2017 primarily due to our acquisition of property, plant and equipment of NT\$ 24,699.2 million (US\$ 833.3 million), partially offset by cash inflows from disposal of subsidiaries of NT\$ 7,020.9 million (US\$236.9 million). Net cash used in investing activities amounted to NT\$ 43,159.5 million in 2016 primarily due to our acquisition of property, plant and equipment of NT\$26,714.2 million and our acquisition of associates and joint ventures of NT\$16,041.5 million. Net cash used in investing activities amounted to NT\$63,351.4 million in 2015 primarily due to our acquisition of associates and joint ventures of NT\$35,673.1 million and our acquisition of property, plant and equipment of NT\$30,280.1 million.

Net cash used in financing activities amounted to NT\$19,323.4 million (US\$651.9 million) in 2017. This amount reflected primarily (i) our distributed cash dividends to owners of the Company in the amount of NT\$11,214.2 million (US\$378.3 million); (ii) our net repayment of short-term bank loans and bills payable and long-term bank loans and bills payable in the amount of NT\$18,512.4 million (US\$624.6 million) and (iii) our net repayment of bonds payable in the amount of NT\$1,124.0 million (US\$37.9 million), which was partially offset by (i) our proceeds from issue of ordinary shares in the amount of NT\$10,290.0 million (US\$347.2 million) and (ii) our proceeds from exercise of employee share options of NT\$1,439.8 million (US\$48.6 million). Net cash used in financing activities amounted to NT\$21,087.0 million in 2016. This amount reflected primarily (i) our distributed cash dividends to owners of the Company in the amount of NT\$12,243.8 million; (ii) our net repayment of short-term bank loans and bills payable and long-term bank loans and bills payable in the amount of NT\$5,630.3 million; (iii) decrease in non-controlling interests in the amount of NT\$3,063.6 million due to Universal Scientific's restructuring; and (iv) the net repayment of bonds payable in the amount of NT\$1,365.1 million. Net cash provided by financing activities amounted to NT\$8,636.3 million in 2015. This amount reflected primarily (i) our net proceeds from short-term bank loans and bills payable and long-term bank loans and bills payable in the amount of NT\$12,776.2 million; (ii) the net proceeds from the 2018 NTD-linked Convertible Bonds of NT\$6,136.4 million and (iii) our proceeds from partial disposal of interests in subsidiaries of NT\$8,910.3 million, which was partially offset by (i) our distributed cash dividends to owners of the Company in the amount of NT\$15,297.5 million and (ii) our payments for repurchases of treasury shares of NT\$5,333.4 million.

As of December 31, 2017 our primary source of liquidity was NT\$46,078.1 million (US\$1,554.6 million) of cash and cash equivalents and NT\$5,312.2 million (US\$179.2 million) of financial assets—current. Our financial assets—current

primarily consisted of quoted shares and swap contracts. As of December 31, 2017, we had total unused credit lines of NT\$174,234.8 million (US\$5,878.4 million). As of December 31, 2017, we had working capital of NT\$36,561.5 million (US\$1,233.5million).

As of December 31, 2017, we had total debts of NT\$76,905.3 million (US\$2,594.6 million), of which NT\$17,962.5 million (US\$606.0 million) were short-term debts and NT\$58,942.8 million (US\$1,988.6 million) were long-term debts. In 2017, the maximum amount of our short-term debts was NT\$24,520.2 million (US\$827.3 million) and the average amount of our short-term debts was NT\$18,094.9 million (US\$610.5 million). The fluctuation was primarily because our working capital balance fluctuated during 2017 from time to time. The annual interest rate for borrowings under our short-term bank loans and bills payable ranged from 0.80% to 4.79% as of December 31, 2017. Our short-term bank loans are primarily revolving facilities with a term of one year, each of which may be extended on an annual basis with lender consent. Our long-term debts consist of bank loans, bills payable, bonds payable and capital lease obligations. As of December 31, 2017, we had outstanding long-term debts, less current portion, of NT\$44,501.5 million (US\$1,501.4 million). As of December 31, 2017, the current portion of our long-term debts was NT\$14,441.3 million (US\$487.2 million). Our long-term bank loans and bills payable typically carried variable annual interest rates which ranged from 0.93% to 5.39% as of December 31, 2017. For the maturity information and interest rates by currencies, see “Item 11—Quantitative and Qualitative Disclosures about Market Risk—Market Risk—Interest Rate Risk.”

Table of Contents

We have pledged a portion of our assets, with a carrying value of NT\$18,853.9 million (US\$636.1 million) as of December 31, 2017, to secure our obligations under our short-term and long-term facilities.

In August 2011, we issued NT\$8.0 billion 1.45% secured corporate bonds with five year term, guaranteed by the Bank of Taiwan, Mega International Commercial Bank, Taiwan Cooperative Bank, First Bank and Hua Nan Bank. The Corporate Bonds bear an annual simple interest and payment by coupon rate from the issue date. The Corporate Bonds matured and were repaid in August 2016. The net proceeds from the Corporate Bonds were used to repay our previous debts.

In September 2011, Anstock Limited, our wholly owned subsidiary incorporated in the Cayman Islands with limited liability, issued RMB150.0 million 3.125% Guaranteed Bonds due September 22, 2014 and RMB500.0 million 4.250% Guaranteed Bonds due September 20, 2016. The 2014 Bonds and 2016 Bonds were offered to certain non-U.S. persons in compliance with Regulation S under the Securities Act. The 2014 and 2016 Bonds are irrevocably and unconditionally guaranteed on an unsecured and unsubordinated basis by us. The 2014 Bonds matured and were repaid on September 22, 2014. The 2016 Bonds bear interest from and including September 20, 2011 at the rate of 4.250% per annum. Interest on the 2016 Bonds is payable semi-annually in arrears on September 20 and March 20 of each year beginning on March 20, 2012. The 2016 Bonds matured and were repaid on September 20, 2016. The net proceeds from the 2014 and 2016 Bonds were advanced by Anstock Limited to ASES AT in the form of an intercompany RMB loan for working capital and capital expenditure with maturity in September 2016.

In September 2013, we issued US\$400.0 million aggregate principal amount of zero coupon convertible bonds due 2018. The 2018 Convertible Bonds were offered to persons outside of the United States in compliance with Regulation S under the Securities Act. The initial conversion price was NT\$33.085 per common share, subject to certain adjustments, determined on the basis of a fixed exchange rate of NT\$29.956 = US\$1.00 (which represents an approximately 31.3% conversion premium over the closing trading price of our common shares on August 28, 2013 of NT\$25.20 per common share). The conversion price is subject to adjustment upon the occurrence of certain events, such as the 2013 Capital Increase, the 2017 Capital Increase and cash dividend distribution. As of the date of this annual report, the bondholders have exercised conversion rights to convert 2018 Convertible Bonds of US\$399.6 million into our ordinary shares at conversion prices ranging from NT\$27.95 to NT\$28.96 per common share. Our board of directors resolved in July 2017 to issue a notice of early redemption to 2018 Convertible Bond holders. In the third quarter of 2017, the closing price of our common shares (translated into U.S. dollars at the prevailing rates) for a period of 20 consecutive trading days was higher than 130% of the conversion price in U.S. dollar translated at the fixed exchange rate of US\$1 to NT\$29.956 determined on pricing date per common share. As a result, we redeemed the outstanding 2018 Convertible Bonds of US\$0.4 million in September 2017. Please refer to note 20 of our consolidated financial statements included in this annual report for more information.

In July 2014, Anstock II Limited offered US\$300.0 million aggregate principal amount of guaranteed bonds due 2017. The Green Bonds are unconditionally and irrevocably guaranteed by us. The Green Bonds were offered to persons outside of the United States in compliance with Regulation S under the Securities Act. The Green Bonds bear interest

from and including July 24, 2014 at the rate of 2.125% per annum. Interest on the Green Bonds is payable semi-annually in arrears on January 24 and July 24 of each year beginning on January 24, 2015. The net proceeds from the Green Bonds offering were used to fund projects that promote our transition to low-carbon and climate-resilient growth. The Green Bonds matured and were fully repaid by Anstock II Limited on July 24, 2017.

In July 2015, we issued US\$200.0 million aggregate principal amount of NTD-linked zero coupon convertible bonds due 2018. The 2018 NTD-linked Convertible Bonds were offered to persons outside of the United States in compliance with Regulation S under the Securities Act. The initial conversion price was NT\$54.5465 per common share, subject to certain adjustments, determined on the basis of a fixed exchange rate of NT\$30.928 = US\$1.00 (which represents an approximately 27.0% conversion premium over the closing trading price of our common shares on June 25, 2015 of NT\$42.95 per common share). The conversion price is subject to adjustment upon the occurrence of certain events, such as the cash dividend distribution. As of the date of this annual report, the conversion price is NT\$47.76 (US\$1.61) per common share. Please refer to note 20 of our consolidated financial statements included in this annual report for more information. The bonds matured and were repaid on March 27, 2018. We used the net proceeds to fund procurement of equipment from overseas.

Table of Contents

In January 2016, we issued NT\$7,000.0 million 1.30% unsecured corporate bonds with five year term and NT\$2,000.0 million 1.50% unsecured corporate bonds with seven year term. The bonds bear an annual simple interest and payment by coupon rate from the issue date. The net proceeds from the bonds were used to repay our previous debts.

In January 2017, we issued NT\$3,700.0 million (US\$124.8 million) 1.25% unsecured corporate bonds with five year term and NT\$4,300.0 million (US\$145.1 million) 1.45% unsecured corporate bonds with seven year term. The bonds bear an annual simple interest and payment by coupon rate from the issue date. The net proceeds from the bonds were used to repay our previous debts.

In March 2017, we granted rights to the record holders of our existing common shares to subscribe for an aggregate of 240,000,000 of our common shares, par value NT\$10.0 per share. Substantially concurrently with the Rights Offering, we also offered 30,000,000 of our common shares to our employees and offered 30,000,000 of our common shares to the public in Taiwan. A total of 300,000,000 of our common shares were offered under the 2017 Capital Increase, which were fully subscribed and raised NT\$10,290.0 million (US\$317.6 million). The net proceeds of the 2017 Capital Increase were used to repay our previous debts. Both the Employee Offering and the Taiwan Public Offering were made pursuant to an offer exempt from registration with the SEC pursuant to Regulation S of the Securities Act.

We currently have one syndicated loan agreement outstanding. In July 2013, we entered into a US\$400.0 million five-year syndicated credit facility, for which the Bank of Taiwan acted as the agent bank, for the purpose of funding the purchase of machinery and equipment at our facility and funding general operations. As of December 31, 2017, NT\$4,761.6 million (US\$160.6 million) was outstanding under this credit facility. This syndicated loan agreement contains undertakings and restrictive covenants relating to the maintenance of certain financial ratios including: (i) current ratio (current assets to current liabilities) of not less than 100.0%; (ii) leverage ratio (total liabilities to tangible net worth) of not higher than 160.0%; (iii) interest coverage ratio (EBITDA to interest expense) of not less than 280.0%; and (iv) tangible net worth not less than NT\$75,000.0 million.

We have in the past failed to comply with certain financial covenants in some of our loan agreements. Such non-compliance may also have, through broadly worded cross-default provisions, resulted in default under some of the agreements governing our other existing debt. As of December 31, 2017, we were not in breach of any of the financial covenants under our existing loan agreements. If we are unable to timely remedy any of our non-compliance under such loan agreements or obtain applicable waivers or amendments, we would breach our financial covenants and our financial condition would be adversely affected. See “Item 3. Key Information—Risk Factors—Risks Relating to Our Business—Restrictive covenants and broad default provisions in our existing debt agreements may materially restrict our operations as well as adversely affect our liquidity, financial condition and results of operations.”

As of December 31, 2017, we have no contingent obligations, which normally consist of guarantees provided by us to our subsidiaries.

We have made, and expect to continue to make, substantial capital expenditures in connection with the expansion of our production capacity. The table below sets forth our principal capital expenditures incurred for the periods indicated.



Table of Contents

	Year Ended December 31,			US\$
	2015	2016	2017	
	NT\$	NT\$	NT\$	
	(in millions)			
Machinery and equipment	18,318.4	21,978.3	19,432.9	655.6
Building and improvements	9,962.4	5,702.6	4,244.8	143.2
Total	28,280.8	27,680.9	23,677.7	798.8

We had commitments for capital expenditures of approximately NT\$7,019.4 million (US\$236.8 million), of which NT\$294.2 million (US\$9.9 million) had been paid as of December 31, 2017, primarily in connection with the expansion of our packaging and testing services operations. We estimate that our environmental capital expenditures for 2018 will be approximately US\$13.3 million, of which 3.9% will be used in climate change adaptation. We may adjust our capital expenditures based on market conditions, the progress of our expansion plans and cash flow from operations. In addition, due to the rapid changes in technology in the semiconductor industry, we frequently need to invest in new machinery and equipment, which may require us to raise additional capital. We cannot assure you that we will be able to raise additional capital should it become necessary on terms acceptable to us or at all. See “Item 3. Key Information—Risk Factors—Risks Relating to Our Business—The packaging and testing businesses are capital intensive. If we cannot obtain additional capital when we need it, our growth prospects and future profitability may be adversely affected.”

We believe that our existing cash, marketable securities, expected cash flow from operations and existing credit lines under our loan facilities will be sufficient to meet our capital expenditures, working capital, cash obligations under our existing debt and lease arrangements, and other requirements for at least the next 12 months. We currently hold cash primarily in U.S. dollars, RMB, New Taiwan dollars, Korean Won and Japanese yen. As of December 31, 2017, we had contractual obligations of NT\$43,572.2 million (US\$1,470.0 million) due in the next three years. We currently expect to meet our payment obligations through the expected cash flow from operations, long-term borrowings and the issuance of additional equity or equity-linked securities. We will continue to evaluate our capital structure and may decide from time to time to increase or decrease our financial leverage through equity offerings or borrowings. The issuance of additional equity or equity-linked securities may result in additional dilution to our shareholders.

From time to time, we evaluate possible investments, acquisitions or divestments and may, if a suitable opportunity arises, make an investment, acquisition or divestment.

Our treasury team, under the supervision of our chief financial officer, is responsible for setting our funding and treasury policies and objectives. Our exposure to financial market risks relates primarily to changes in interest rates and foreign currency exchange rates. To mitigate these risks, we utilize derivative financial instruments, the application of which is primarily to manage these exposures, and not for speculative purposes.

We have, from time to time, entered into interest rate swap transactions to hedge our interest rate exposure. In addition, we have, from time to time, entered into forward exchange contracts, swap contracts, cross currency swap

contracts and European foreign currency options contracts to hedge our existing assets and liabilities denominated in foreign currencies. See “Item 11. Quantitative and Qualitative Disclosures about Market Risk” and notes 7 and 34 to our consolidated financial statements included in this annual report.

## RESEARCH AND DEVELOPMENT

For 2015, 2016 and 2017, our research and development expenditures totaled approximately NT\$10,937.6 million, NT\$11,391.1 million and NT\$11,746.6 million (US\$396.3 million), respectively. These expenditures represented approximately 3.9%, 4.1% and 4.0% of operating revenues in 2015, 2016 and 2017, respectively. We have historically expensed all research and development costs as incurred and none is currently capitalized. As of January 31, 2018, we employed 7,641 employees in research and development.

## Table of Contents

### Packaging

We centralize our research and development efforts in packaging technology in our Kaohsiung, Taiwan facilities. After initial phases of development, we conduct pilot runs in one of our facilities before new technologies or processes are implemented commercially at other sites. Facilities with special product expertise, such as ASE Korea, also conduct research and development of these specialized products and technologies at their sites. One of the areas of emphasis for our research and development efforts is improving the efficiency and technology of our packaging processes and these efforts are expected to continue. We are also putting significant research and development efforts into the development and adoption of innovative technology. We work closely with manufacturers of our packaging equipment and materials in designing and developing the equipment and materials used in our production process. We also collaborate with our significant customers to co-develop new product and process technologies.

In addition to investing in the development of more advanced packaging technology and improving production efficiency, a significant portion of our research and development efforts is focused on the development of IC substrate production technology for BGA packaging. Substrate is the principal raw material for BGA packages. Development and production of IC substrates involve complex technology. We are currently working closely with certain first-tier substrate suppliers in Asia, primarily including those located in Japan, Taiwan and Korea. We believe that our successful cooperation with substrate suppliers to enhance the overall substrate production capability and to meet future package requirements has enabled us to capture an increasingly important value-added component of the packaging process, helped ensure a stable and cost-effective supply of substrates for our BGA packaging operations and shortened time to market.

### Testing

Our research and development efforts in the area of testing have focused primarily on developing testing solutions, including logic, mixed-signal, RF and discrete IC /module /SiP, Optical module, characterization of semiconductors, layout design and electrical simulation for high frequency test board and developing software of parametric test data analysis. We work closely with our customers on the leading edge test technologies, such as 3D IC test and advanced probe test technology such as very fine pitch probe card. Our research and development operations also include an equipment development group, which currently designs testing hardware and software for specific semiconductors to offer our customers cost effective test solutions.

### Electronic manufacturing services

To further enhance the quality of our services and products, we focus on developing diversified and innovative products to improve our competitiveness. By leveraging our proprietary research and development expertise, we are able to optimize our product design, engineering and manufacturing capabilities to provide our customers with high

performance and cost-effective products and services. During the process of designing, as well as developing the technology for, our software and hardware, our research and development team also dedicates itself to discovering new know-how, and then applying such know-how to create new, advanced and improved products, processes, methodology and services. We are currently investing in the development of products used in electronic manufacturing services in relation to computers and peripherals, communications, consumer products, automotive, industrial, storage and server applications.

#### TREND INFORMATION

Other than as disclosed elsewhere in this annual report, we are not aware of any trends, uncertainties, demands, commitments or events for the period from January 1, 2017 to December 31, 2017 that are reasonably likely to have a material effect on our operating revenues, income, profitability, liquidity or capital resources, or that caused the disclosed financial information to be not necessarily indicative of future operating results or financial conditions.

#### OFF-BALANCE SHEET ARRANGEMENTS

There are no off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that are material to investors.

Table of Contents

## TABULAR DISCLOSURE OF CONTRACTUAL OBLIGATIONS

The following table sets forth the maturity of our contractual obligations as of December 31, 2017.

	Payments Due by Period				
	Total	Under 1 Year	1 to 3 Years	3 to 5 Years	After 5 Years
	NT\$	NT\$	NT\$	NT\$	NT\$
	(in millions)				
Contractual Obligations:					
Long-term debt <sup>(1)</sup>	61,504.3	15,418.0	25,691.0	13,032.6	7,362.7
Capital lease obligations <sup>(2)</sup>	393.5	18.6	374.9	-	-
Operating leases <sup>(3)</sup>	1,104.6	246.0	272.1	167.3	419.2
Purchase obligations <sup>(4)</sup>	1,551.6	1,551.6	-	-	-
Total <sup>(5)(6)(7)(8)</sup>	64,554.0	17,234.2	26,338.0	13,199.9	7,781.9

(1) Includes long-term borrowings and bonds payable (before the deduction of unamortized arrangement fees, unamortized issuance cost and discounts on bonds payable) and interest payments.

(2) Represents our commitments under property leases and imputed interest. These obligations are recorded on our consolidated balance sheets under the line item of other non-current liabilities.

(3) Represents our commitments under leases for land, machinery and equipment such as testers, and office buildings and equipment. See note 37 to our consolidated financial statements included in this annual report.

(4) Represents unpaid commitments for construction. These commitments were not recorded on our consolidated balance sheets as of December 31, 2017. See note 37 to our consolidated financial statements included in this annual report. Total commitments for construction of buildings were approximately NT\$1,665.0 million (US\$56.2 million), of which NT\$113.4 million (US\$3.8 million) had been paid as of December 31, 2017.

(5) Excludes non-binding commitments to purchase machinery and equipment of approximately NT\$5,354.4 million (US\$180.6 million), of which NT\$180.8 million (US\$6.1 million) had been paid as of December 31, 2017. See note 37 to our consolidated financial statements included in this annual report.

(6) Excludes unpaid amounts that we were contracted for the construction related to our real estate business of approximately NT\$1,548.8 million (US\$52.3 million) as of December 31, 2017, since the schedule of payments is difficult to determine. See note 37 to our consolidated financial statements included in this annual report.

(7) Excludes our unfunded defined benefit obligation since the schedule of payments is difficult to determine. Under defined benefit pension plans, we made pension contributions of approximately NT\$484.8 million (US\$16.4 million) in 2017, and we estimate that we will contribute approximately NT\$272.9 million (US\$9.2 million) in 2018. See note 22 to our consolidated financial statements included in this annual report.

(8) Excludes uncertain tax liabilities. We recognized additional taxes payable of NT\$364.8 million (US\$12.3 million) and accrued interest and penalties of NT\$15.8 million (US\$0.5 million) related to uncertain tax positions as of or for the year ended December 31, 2017. Because we were unable to make a reasonable estimate of the timing of the tax audits, such balances were not included in the table.

## SAFE HARBOR

Please see the section entitled “Special Note Regarding Forward-Looking Statements.”

## Item 6. Directors, Senior Management and Employees

### DIRECTORS AND SENIOR MANAGEMENT

#### Directors

Our board of directors is elected by our shareholders in a general meeting at which a quorum, consisting of a majority of all issued and outstanding common shares, not including treasury stocks and common shares held by our subsidiaries, is present. The chairman is elected by the board from among the directors. Our eleven-member board of directors, including three independent directors, is responsible for the management of our business.

Table of Contents

We currently have eleven directors, serving a three-year term. The current board of directors began serving on June 24, 2015. Directors may serve any number of consecutive terms and may be removed from office at any time by a resolution adopted at a meeting of shareholders. Normally, all board members are elected at the same meeting of shareholders, except where the posts of one-third or more of the directors are vacant, at which time an extraordinary shareholders' meeting shall be convened to elect directors to fill the vacancies. We and our subsidiaries do not have service contracts with our directors that provide for benefits upon termination of employment.

Our audit committee currently consists of our independent directors, Shen-Fu Yu, Ta-Lin Hsu and Mei-Yueh Ho, who are independent under Rule 10A-3 and the ROC Securities and Exchange Act and are financially literate with accounting or related financial management expertise. The audit committee has responsibility for, among other things, overseeing the qualifications, independence and performance of our independent auditors and the integrity of our financial statements.

Our compensation committee currently consists of Shen-Fu Yu and Ta-Lin Hsu, our independent directors, and Hsiao-Ying Ku. Our board of directors established a compensation committee to satisfy the requirements under the ROC Securities Exchange Act. Under ROC securities regulations, a compensation committee should have at least one independent director who is considered independent under ROC securities regulations. We do not assess the independence of our compensation committee member under the independence requirements of the NYSE listing standards but adopt the independence standard as promulgated under the ROC Regulations Governing the Appointment and Exercise of Powers by the Remuneration Committee of a Company Whose Stock is Listed on the Stock Exchange or Traded Over the Counter. See "Item 16G. Corporate Governance" for more information. Our compensation committee meets at least twice a year. Our board of directors has adopted a compensation committee charter for our compensation committee. The compensation committee has responsibility for, among other things, setting forth and reviewing policies, systems, standards and structures regarding performance evaluation and compensation of the directors, managerial personnel, and evaluating compensation of the directors and managerial personnel.

The following table sets forth information regarding all of our directors as of January 31, 2018. In accordance with ROC law, each of our directors is elected either in his or her capacity as an individual or as an individual representative of a corporation or government. Persons designated to represent corporate or government shareholders as directors are typically nominated by such shareholders at the annual general meeting and may be replaced as representatives by such shareholders at will. Of the current directors, six represent ASE Enterprises Limited. The remaining directors serve in their capacity as individuals.

Table of Contents

<b>Name</b>	<b>Position</b>	<b>Director Since</b>	<b>Age</b>	<b>Other Significant Positions Held Outside of the ASE Group</b>
Jason C.S. Chang <sup>(1)(2)</sup>	Director, Chairman and Chief Executive Officer	1984	73	None
Richard H.P. Chang <sup>(1)</sup>	Director, Vice Chairman and President	1984	71	Chairman, Sino Horizon Holdings Ltd.
Rutherford Chang <sup>(3)</sup>	Director and General Manager of China Region	2009	38	None
Tien Wu <sup>(2)</sup>	Director and Chief Operating Officer	2003	60	None
Joseph Tung <sup>(2)</sup>	Director and Chief Financial Officer	1997	59	None
Raymond Lo <sup>(2)</sup>	Director and General Manager, Kaohsiung packaging facility	2006	63	None
Tien-Szu Chen <sup>(2)</sup>	Director and General Manager, ASE Inc. Chung-Li branch	2015	56	None
Jeffrey Chen <sup>(2)</sup>	Director and General Manager of China Headquarters in Shanghai	2003	53	Independent Director and a member of the compensation committee, Mercuries & Associates Holding Ltd; director, Jiangsu Longchen Greentech Co., Ltd.
Shen-Fu Yu	Independent Director and Member, Audit Committee and Compensation Committee	2009	73	Director, Arima Lasers Corporation and Arima Communications; supervisor, Dynapack International Technology Corporation and San Fu Chemical Co., Ltd.
Ta-Lin Hsu	Independent Director and Member, Audit Committee and Compensation Committee	2009	74	Chairman and founder, H&Q Asia Pacific; Chairman, H&Q Taiwan Co. Ltd.
Mei-Yueh Ho	Independent Director and Member, Audit Committee	2015	67	Independent Director, Bank of Kaohsiung, Ltd., KINPO Electronics Inc., AU Optronics Corp. and Ausnutria Dairy Corporation Ltd.

(1) Jason C.S. Chang and Richard H.P. Chang are brothers.

Representative of ASE Enterprises Limited, a company organized under the laws of Hong Kong, which held 15.66% of our total outstanding shares as of January 31, 2018. All of the outstanding shares of ASE Enterprises (2)Limited are held through intermediary holding companies and under a revocable trust established under the laws of the Bailiwick of Guernsey for the benefit of our Chairman and Chief Executive Officer, Jason C.S. Chang, and his family.

(3) Rutherford Chang is the son of Jason C.S. Chang.

Audit Committee



For a discussion of our audit committee, see “—Directors and Senior Management—Directors.”

Table of Contents

## Executive Officers

The following table sets forth information regarding all of our executive officers as of January 31, 2018.

<b>Name</b>	<b>Position</b>	<b>Years with the Company</b>	<b>Age</b>
Jason C.S. Chang	Chairman and Chief Executive Officer	33	73
Richard H.P. Chang	Vice Chairman and President; Chairman, Universal Scientific Shanghai	33	71
Rutherford Chang	General Manager, China Region	12	38
Tien Wu	Chief Operating Officer	17	60
Joseph Tung	Chief Financial Officer	23	59
Raymond Lo	General Manager, ASE Test Taiwan; General Manager, Kaohsiung packaging facility	31	63
Tien-Szu Chen	General Manager, ASE Inc. Chung-Li branch	29	56
Chun-Che Lee	General Manager, ASE Electronics	33	58
Songwoon Kim	General Manager, ASE Korea	33	59
Chih-Hsiao Chung	General Manager, ASE Japan and Wuxi Tongzhi	18	53
Chiu-Ming Cheng	General Manager, ASESAT	27	57
Chih-An Hsu	General Manager, ASEKS	20	54
Yen-Chieh Tsao	General Manager, ASEWH	6	60
Shih-Kang Hsu	Chief Executive Officer, ASEN	17	52
Meng-Hui Lin	General Manager, ASE Shanghai	23	51
Kwai Mun Lee	President, ASE South-East Asia operations	19	55
Lid Jian Chiou	General Manager, ASE Singapore Pte. Ltd.	14	61
Heng Ee Ooi	General Manager, ASE Malaysia	23	49
Kenneth Hsiang	General Manager, ISE Labs	18	47
Chen-Yen Wei	Chairman, Universal Scientific; Chairman, USI Inc.; President, Universal Scientific Shanghai	38	63
Feng-Ta Chen	General Manager, UGJQ	20	55
Jack Hou	General Manager, UGTW	23	61
Ta-I Lin	General Manager, UGKS	30	54
Yueh-Ming Lin	General Manager, USISZ	22	52
Omar Anaya Galván	General Manager, USI Mexico	14	48

## Biographies of Directors and Executive Officers

*Jason C.S. Chang* has served as Chairman of ASE Inc. since its founding in March 1984 and as its Chief Executive Officer since May 2003. Mr. Chang holds a bachelor's degree in electrical engineering from National Taiwan University in Taiwan and a master's degree from the Illinois Institute of Technology. He is the brother of Richard H.P.

Chang, our Vice Chairman and President.

*Richard H.P. Chang* has served as Vice Chairman of ASE Inc. since November 1999 after having served as President of ASE Inc. since its founding in March 1984, and served as Chief Executive Officer of ASE Inc. from July 2000 to April 2003. In February 2003, he was again appointed President of ASE Inc. upon the retirement of Mr. Leonard Y. Liu. Mr. Chang has also served as the Chairman of Universal Scientific Industrial (Shanghai) Co., Ltd. since June 2008. Mr. Chang holds a bachelor's degree in industrial engineering from Chung Yuan Christian University in Taiwan. He is the brother of Jason C.S. Chang, our Chairman and Chief Executive Officer.

*Rutherford Chang* has served as a director of ASE Inc. since June 2009 and General Manager of China Region of ASE Group. since June 2010. He joined ASE Group in March 2005. Mr. Chang holds a bachelor's degree in psychology from Wesleyan University in Connecticut. He is the son of Jason C.S. Chang, our Chairman and Chief Executive Officer.

*Tien Wu* has served as a director of ASE Inc. since June 2003 and Chief Operating Officer since April 2006, prior to which he served as the President of Worldwide Marketing and Strategy of the ASE Group. Prior to joining ASE Inc. in March 2000, Mr. Wu held various managerial positions with IBM. Mr. Wu holds a bachelor's degree in civil engineering from National Taiwan University in Taiwan, a master's degree and a doctorate degree in mechanical engineering and applied mechanics from the University of Pennsylvania.

*Joseph Tung* has served as a director of ASE Inc. since April 1997 and Chief Financial Officer since December 1994. He was an independent director of Ta Chong Bank Ltd. from October 2007 to December 2017. Before joining ASE Inc., Mr. Tung was a Vice President at Citibank, N.A. Mr. Tung holds a bachelor's degree in economics from the National Chengchi University in Taiwan and a master's degree in business administration from the University of Southern California.

Table of Contents

*Raymond Lo* has served as a director of ASE Inc. since May 2006 and General Manager of our packaging facility in Kaohsiung, Taiwan since April 2006. Mr. Lo also served as a supervisor of ASE Inc. between July 2000 and May 2006. Before joining ASE Group, Mr. Lo was the Director of Quality Assurance at Zeny Electronics Co. Mr. Lo holds a bachelor's degree in electronic physics from the National Chiao Tung University in Taiwan.

*Tien-Szu Chen* has served as a director of ASE Inc. since June 2015 and General Manager of ASE Inc. Chung-Li branch since August 2015. Prior to his current position, Mr. Chen served as our supervisor from June 2006 to June 2015 and as President of Power ASE Technology Inc. from June 2006 to May 2012. He also held several key management positions within the ASE Group from June 1988 to June 2006, including President of ASE Inc. Chung-Li branch and Senior Vice President of ASE Inc. Prior to joining ASE Group in June 1988, Mr. Chen worked at TSMC and Philips Semiconductor Kaohsiung. Mr. Chen received his bachelor's degree in industrial engineering from Chung Yuan Christian University in Taiwan.

*Jeffrey Chen* has served as a director of ASE Inc. since June 2003 and General Manager of China Headquarters in Shanghai. Prior to joining ASE Inc., he worked in the corporate banking department of Citibank, N.A. in Taipei and as a Vice President of corporate finance at Bankers Trust in Taipei. Mr. Chen holds a bachelor's degree in finance and economics from Simon Fraser University in Canada and a master's degree in business administration from the University of British Columbia in Canada.

*Shen-Fu Yu* has served as an independent director of ASE Inc. since June 2009. He is also a director of Arima Lasers Corporation and Arima Communications, and a supervisor of Dynapack International Technology Corporation and San Fu Chemical Co., Ltd. Mr. Yu is also a member of the audit committee and compensation committee of ASE Inc. He worked at Deloitte & Touche Accounting Firm as a consultant from June 2003 to November 2006. Mr. Yu holds a bachelor's degree in accounting from National Taiwan University in Taiwan and a master's degree in accounting from National Chengchi University in Taiwan.

*Ta-Lin Hsu* has served as an independent director of ASE Inc. since June 2009. He is also a member of the audit committee and compensation committee of ASE Inc. He is currently the chairman and founder of H&Q Asia Pacific and chairman of H&Q Taiwan Co. Ltd. Mr. Hsu holds a bachelor's degree in physics from National Taiwan University, a master's degree in electrophysics from the Polytechnic Institute of Brooklyn and a doctorate degree in electrical engineering from the University of California, Berkeley.

*Mei-Yueh Ho* has served as an independent director and a member of the audit committee of ASE Inc. since June 2015. Ms. Ho is also an independent director and a member of the audit committee of the Bank of Kaohsiung, Ltd., KINPO Electronics Inc., AU Optronics Corp. and Ausnutria Dairy Corporation Ltd. She is also a member of the compensation committee of the Bank of Kaohsiung, Ltd., KINPO Electronics Inc. and Ausnutria Dairy Corporation Ltd. Ms. Ho served as Minister of Ministry of Economic Affairs, ROC from May 2004 to January 2006. She was also Chairperson of the Council for Economic Planning and Development, ROC from May 2007 to May 2008. Ms. Ho holds a bachelor's degree in agricultural chemistry from National Taiwan University in Taiwan.

*Chun-Che Lee* has served as a General Manager of ASE Electronics Inc. since August 2011, prior to which he was a vice president, director and manager of research and development at ASE Inc. since 1984. Mr. Lee holds a bachelor's degree in aeronautics from Tamkung University in Taiwan.

*Songwoon Kim* has served as General Manager of ASE (Korea) Inc. since February 2017, after serving as a Senior Vice President of ASE (Korea) Inc. since July 1999. Mr. Kim was a senior Manager of Motorola Korea, Limited before joining ASE (Korea) Inc. when we acquired Motorola Korea, Limited. He holds a bachelor's degree in mechanical engineering from A-Jou University in Korea.

*Chih-Hsiao Chung* has served as General Manager of ASE Japan Co. Ltd. since March 2011, General Manager of Wuxi Tongzhi Microelectronics Co., Ltd. since June 2013, and Chairman and CEO of ASEEE since September 2015. Mr. Chung has also managed the sales and marketing of ASE Japan Co. Ltd. region since April 2007. Before joining ASE Group, Mr. Chung was the Senior Manager of Sale and Marketing at Kimberly Clark Co., Taiwan. He holds a master's degree in business administration from the University of Wisconsin-Madison.

Table of Contents

*Chiu-Ming Cheng* has served as General Manager of ASE Assembly & Test (Shanghai) Limited since September 2012, after serving as Vice President of ASE's Kaohsiung packaging facility since October 2004. He joined ASE Group in April, 1990. Mr. Cheng holds a master's degree in public policy from National Sun Yat-Sen University in Taiwan.

*Chih-An Hsu* has served as General Manager of ASE (KunShan) Inc. since July 2012, after serving as Vice President of ASE's Chung-Li since July 2006. He joined ASE Group in February 1997. Mr. Hsu holds a bachelor's degree in industrial engineering from National Tsing Hua University in Taiwan.

*Yen-Chieh Tsao* has served as General Manager of ASE (Weihai), Inc. since October 2013 after serving as Vice President of ASE's Chung-Li since October 2011. Mr. Tsao was the Vice President of Motorola Electronics Taiwan Ltd. prior to joining ASE Group. He holds a bachelor's degree in physics from the Chinese Culture University in Taiwan.

*Shih-Kang Hsu* has served as Chief Executive Officer of Suzhou ASEN Semiconductors Co., Ltd. since August 2010, after serving as Senior Vice President of ASE (U.S.) Inc. since June 2006. He joined ASE Group in June 2000. Mr. Hsu holds a master's degree in mechanical engineering from Case Western Reserve University.

*Meng-Hui Lin* has served as General Manager of ASE (Shanghai) Inc. since Oct 2014. He joined ASE Group in 1994, and has worked in various fields with ASE Group, e.g., IE, quality engineering, process engineering, research & development and manufacturing management. He holds a master's degree in industrial engineering from Texas A&M University.

*Kwai Mun Lee* has served as President of our Southeast Asia operations, with responsibility for the operations of our Penang, Malaysia and Singapore manufacturing facilities, since March 2006. Before joining the ASE Group, Mr. Lee held senior management positions at Chartered Semiconductor and STATS ChipPAC. He started his career as an engineer at Intel. He holds a degree in engineering from the Swinburne Institute of Technology in Australia.

*Lid Jian Chiou* has served as General Manager of ASE Singapore Pte. Ltd. since September 2010 after serving as Senior Director of Operations since November 2003. Prior to that, he worked several years with Texas Instruments and Chartered Semiconductor. Mr. Chiou holds a master's degree in business administration from the State University of New York and a bachelor's degree in engineering from the University of Strathclyde in the United Kingdom.

*Heng Ee Ooi* has served as General Manager of ASE Malaysia since July 2016 after serving as Vice President of operations since July 2015. He joined ASE in July 1994. Before joining ASE, he worked as a process engineer at

AMD, Penang. Mr. Ooi holds a bachelor's degree in chemical engineering from Universiti Teknologi Malaysia.

*Kenneth Hsiang* has served as General Manager of ISE Labs, Inc. since June 2004. Prior to joining ASE Group in November 1999, Mr. Hsiang worked in management positions within finance and strategic analysis in the healthcare and biotech industries in the San Francisco Bay area in California. He also worked for Price Waterhouse LLP as a Certified Public Accountant. Mr. Hsiang received a bachelor's degree in economics & rhetoric from the University of California, Berkeley.

*Chen-Yen Wei* has served as Chairman of Universal Scientific Industrial Co., Ltd. since July 2014, Chairman of USI Inc. since April 2015, and President of Universal Scientific Industrial (Shanghai) Co., Ltd. since April 2008. He joined Universal Scientific Industrial Co., Ltd. as an engineer in August 1979. He holds a bachelor's degree in communication engineering from National Chiao Tung University in Taiwan.

*Feng-Ta Chen* has served as General Manager of Universal Global Technology (Shanghai) Co., Ltd. since September 2013. He joined Universal Scientific Industrial Co., Ltd. as a Wireless Product PLM Department head in July 1997. He holds a bachelor's degree in literature from the Chinese Culture University in Taiwan.

*Jack Hou* has served as General Manager of Universal Global Scientific Industrial Co., Ltd. since January 2010 and Vice President of Automotive & Visual Product Devices and Module Turnkey Management Business Unit of Universal Scientific Industrial Co., Ltd. since April 2012. He joined Universal Scientific Industrial Co., Ltd. as a section manager in February 1994. He holds a master's degree in biomedical engineering from Ohio State University and a master's degree in computer science from the University of Dayton in Ohio.

Table of Contents

*Ta-I Lin* has served as General Manager of Universal Global Technology (Kunshan) Co. Ltd. since August 2011. He joined Universal Scientific Industrial Co., Ltd. as an engineer in August 1987. He holds a bachelor's degree in electrical engineering from National Cheng Kung University in Taiwan and an executive master of business administration from Peking University in China.

*Yueh-Ming Lin* has served as General Manager of USI Electronics (Shenzhen) Co. Ltd. since January 2015 and Vice President of Global Operation Management (Shenzhen) Division of USI Electronics (Shenzhen) Co. Ltd. since February 2017. He joined Universal Scientific Industrial Co., Ltd. as a section manager in October 1995. He holds a bachelor's degree in electrical engineering from Feng Chia University in Taiwan.

*Omar Anaya Galván* has served as General Manager of Universal Scientific Industrial De Mexico S.A. DE C.V. since March 2015. He has worked in the electronics industry for over 25 years and has experience in various technical, quality and manufacturing management roles. He has been working at Universal Scientific Industrial (Shanghai) Co., Ltd. and its directly and indirectly held subsidiaries since March 2003. He holds a bachelor's degree in electronic systems engineering from the Monterrey Institute of Technology and Higher Education in Mexico.

The business address of our directors and executive officers is our registered office.

## COMPENSATION

In 2017, we recorded expenses of approximately NT\$863.5 million (US\$29.1 million) as remuneration to our directors and executive officers. We did not pay any remuneration in kind to our directors or executive officers in 2017. In 2017, we accrued pension costs of NT\$3.2 million (US\$0.1 million) for retirement benefits for our management. According to our Articles of Incorporation, the remuneration of our independent directors is set at NT\$3.0 million (US\$0.1 million) per person per year. We set aside 5.25% to 8.25% of net profit before income tax, employees' compensation and remuneration to the directors as employees' compensation and no more than 0.75% as remuneration to the directors.

We have not provided any loans to or guarantees for the benefit of any of our directors or executive officers. For information regarding our pension and other retirement plans and those of our subsidiaries, see note 22 to our consolidated financial statements included in this annual report.

## ASE Inc. Employee Bonus and Stock Option Plans



We award bonuses to employees of ASE Inc. and its subsidiaries who are located in Taiwan based on overall income and individual performance targets. Prior to 2009, these employees were eligible to receive bonuses in the form of our common shares valued at par. Beginning in 2009, employees are eligible to receive bonuses in the form of our common shares valued at the closing price (after adjustment with consideration of the effects on the share price, if any, brought by cash and stock dividends resolved at shareholders' meetings) of our common shares on the day prior to our shareholders' meeting. Actual amounts of bonuses to individual employees are determined based upon the employee meeting specified individual performance objectives. We granted aggregate values of NT\$2,335.6 million, NT\$2,033.8 million and NT\$2,151.9 million (US\$72.6 million) as cash bonus to our employees in 2015, 2016 and 2017, respectively.

We currently maintain two option plans, adopted in 2010 and 2015. The option plan adopted in 2004 and 2007 expired in May 2015 and December 2017, respectively. Pursuant to these plans, our full-time employees, including domestic and foreign subsidiaries, are eligible to receive stock option grants. Each option entitles the holder to purchase one ASE Inc. common share at a price not less than the closing market price on the date of the option issuance, such exercise price being subject to retroactive adjustment in the event of certain capital transactions in subsequent periods. Each option is valid for ten years from the date of the grant. 40.0% of the options originally granted vest upon the second anniversary of the grant date, and an additional 10.0% of the options originally granted vest every six months thereafter. Each option expires at the end of the tenth year following its grant date. The options are generally not transferable. Except for options that have been converted, the remaining options expired in December 2017. As of December 31, 2017, a total of 199,999,500 options had been granted under the 2010 plan, 187,719,500 of which had an original exercise price of NT\$28.6 per share (currently adjusted to NT\$20.4 per share) and 12,280,000 of which had an original exercise price of NT\$28.75 per share (currently adjusted to NT\$22.6 per share). As of December 31, 2017, a total of 94,270,000 options had been granted under the 2015 plan. The exercise price under the 2015 plan was NT\$36.50 per share.

Table of Contents

ASE Mauritius Inc. Share Option Plan

ASE Mauritius Inc. maintained one option plan adopted in 2007. Under this plan, certain employees of ASE Mauritius Inc. and the ASE Group are granted options to purchase ordinary shares of ASE Mauritius Inc. at an exercise price of US\$1.7, which exercise price was determined by taking into account a fairness opinion rendered by an independent appraiser and was reviewed by our accountants. Each option is valid for ten years from the date of the grant. As of December 31, 2017, all 30,000,000 options granted under this plan expired.

USI Enterprise Limited Share Option Plans

As of December 31, 2017, USI Enterprise Limited maintained three option plans adopted in 2007, 2010 and 2011, under which certain employees of Universal Scientific and our employees were granted options to purchase common shares of USI Enterprise Limited. Each option under these three plans is valid for ten to thirteen years from the date of the grant. As of December 31, 2017, we had 11,724,500 options outstanding with an exercise price of US\$1.53 per share, 6,456,540 options outstanding with an exercise price of US\$2.42 per share and 7,375,200 options outstanding with an exercise price of US\$2.94 per share under these three plans respectively.

Universal Scientific Shanghai Option Plans

As of December 31, 2017, Universal Scientific Shanghai maintained one option plan adopted in 2015. Under this plan, certain employees of Universal Scientific Shanghai are granted options to purchase ordinary shares of Universal Scientific Shanghai at an exercise price of RMB15.5 per share. Each option is valid for ten years from the date of the grant. As of December 31, 2017, we had 22,341,000 options outstanding under this plan with an exercise price of RMB15.5 per share.

BOARD PRACTICES

General

For a discussion of the term of office of the board of directors, see “—Directors and Senior Management.” No benefits are payable to members of the board or the executive officers upon termination of their relationship with us.

## Compensation Committee

For a discussion of our compensation committee, see “—Directors and Senior Management—Directors.”

## EMPLOYEES

The following table sets forth certain information concerning our employees as of the dates indicated.

	As of December 31,		
	2015	2016	2017
Total	65,789	66,711	68,753
Function			
Direct labor	35,770	36,574	38,362
Indirect labor (manufacturing)	16,910	16,724	5,850
Indirect labor (administration)	5,929	5,927	16,971
Research and development	7,180	7,486	7,570
Location			
Taiwan	34,877	35,763	35,828
PRC	22,475	22,369	24,005
Korea	2,701	2,662	2,558
Malaysia	2,982	3,230	3,680
Japan	502	490	429
Singapore	986	869	852
United States	379	392	384
Others	887	936	1,017

88

Table of Contents

Eligible employees may participate in our employee share bonus plan and stock option plans and our subsidiaries' share option plans, such as the option plans adopted by ASE Mauritius, USI Enterprise Limited, and Universal Scientific Shanghai. See “—Compensation.”

We have never experienced a work stoppage caused by our employees. We believe that our relationship with our employees is good.

## SHARE OWNERSHIP

The following table sets forth certain information with respect to our common shares and options of ASE Inc. exercisable for our common shares held by our directors and executive officers as of January 31, 2017. Percentage of beneficial ownership is based on 8,739,734,964 common shares outstanding as of January 31, 2018.

Director or Executive Officer	Number of ASE Inc. Common Shares Beneficially Held <sup>(1)</sup>	Percentage of ASE Inc. Total Common Shares Issued and Outstanding	Number of Options Exercisable <sup>(2)</sup>	Exercise Price of Options (NT\$)	Expiration Date of Options
Jason C.S. Chang	1,889,032,057 <sup>(3)</sup>	21.61%	0	-	-
Richard H. P. Chang	243,513,779	2.79%	0	-	-
Rutherford Chang	3,155,294	*	0	-	-
Tien Wu	7,354,946	*	0	-	-
Joseph Tung	5,426,823	*	0	-	-
Raymond Lo	3,566,861	*	*	20.40	2020/5/6
Tien-Szu Chen	2,363,642	*	0	-	-
Jeffrey Chen	2,166,000	*	0	-	-
Shen-Fu Yu	4,776	*	0	-	-
Ta-Lin Hsu	0	0.00%	0	-	-
Mei-Yueh Ho	0	0.00%	0	-	-
Chun-Che Lee	3,744,502	*	*	20.40	2020/5/6
Songwoon Kim	0	0.00%	*	20.40	2020/5/6
Chih-Hsiao Chung	380,979	*	*	20.40	2020/5/6
Chiu-Ming Cheng	738,621	*	*	20.40	2020/5/6
Chih-An Hsu	100,000	*	0	-	-
Yen-Chieh Tsao	0	0.00%	*	36.50	2025/9/10

Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

Shih-Kang Hsu	260,000	*	*	20.40	2020/5/6
Meng-Hui Lin	360,940	*	*	20.40	2020/5/6
Kwai Mun Lee	0	0.00%	0	-	-
Lid Jian Chiou	192,000	*	0	-	-
Heng Ee Ooi	0	0.00%	0	-	-
Kenneth Hsiang	490,000	*	*	20.40	2020/5/6
Chen-Yen Wei	732,230	*	0	-	-
Feng-Ta Chen	0	0.00%	0	-	-
Jack Hou	70,917	*	0	-	-
Ta-I Lin	0	0.00%	0	-	-
Yueh-Ming Lin	13,000	*	0	-	-
Omar Anaya Galvan	0	0.00%	0	-	-

(1) Including shares directly held and shares beneficially owned through spouse and minor children.

(2) Each option may be converted into one of our common shares. The figures referred herein include options convertible into our common shares scheduled to vest within 60 days as of the date hereof.

(3) Including 1,368,655,773 common shares Jason C.S. Chang beneficially owned through ASE Enterprises Limited, Aintree Limited and JC Holdings Limited and 520,376,284 common shares beneficially owned through Value Tower Limited, respectively. See “Item 7. Major Shareholders and Related Party Transactions—Major Shareholders.”

\* The sum of the number of common shares held and the number of common shares issuable upon exercise of all options held is less than 1.0% of our total outstanding shares.

Table of Contents

## Item 7. Major Shareholders and Related Party Transactions

## MAJOR SHAREHOLDERS

The following table sets forth information known to us with respect to the beneficial ownership of our common shares, as of January 31, 2018, by each shareholder known by us to beneficially own more than 5.0% of our total outstanding shares.

Beneficial ownership is determined in accordance with the rules and regulations of the SEC. Percentage of beneficial ownership is based on 8,739,734,964 common shares outstanding as of January 31, 2018. In addition, in computing the number of shares beneficially owned by a person and the percentage ownership of that person, we have included shares that the person has the right to acquire within 60 days, including through the exercise of any option, warrant or other right or the conversion of any other security. These shares, however, are not included in the computation of the percentage ownership of any other person.

Name of Shareholder or Group	Common Shares Beneficially Owned	
	Number	Percentage
Jason C.S. Chang <sup>(1)</sup>	1,889,032,057	21.61 %

Jason C.S. Chang is our Chairman and Chief Executive Officer. Jason C. S. Chang beneficially owned 1,368,655,773 common shares through ASE Enterprises Limited, Aintree Limited and JC Holdings Limited and 520,376,284 common shares through Value Tower Limited, respectively. As a result, Jason C.S. Chang beneficially owned 1,889,032,057 common shares, representing 21.61% of our total outstanding shares (based on 8,739,734,964 common shares as of January 31, 2018). ASE Enterprises Limited is a company organized under the laws of Hong Kong. All of the outstanding shares of ASE Enterprises Limited are held by Aintree Limited. Aintree (1)Limited is a company organized under the laws of the British Virgin Islands. All of the shares of Aintree Limited are held by JC Holdings Limited. The shares of JC Holdings Limited are held through intermediary holding companies and under a revocable trust established under the laws of the Bailiwick of Guernsey for the benefit of our Chairman and Chief Executive Officer, Jason C.S. Chang, and his family. Value Tower Limited is a company organized under the laws of the British Virgin Islands. Jason C.S. Chang is the sole shareholder and director of Value Tower Limited. There were no significant changes in the percentage of ownership beneficially owned by Jason C.S. Chang in 2015, 2016 and 2017.

The following table sets forth information relating to our common shares held directly by our consolidated subsidiaries and our equity method investee as of January 31, 2018.



Table of Contents

Name of Shareholder	Common Shares Beneficially Owned		
	Number	Percentage	
ASE Test <sup>(1)</sup>	88,200,472	1.01	%
ASE Test Taiwan <sup>(2)</sup>	10,978,776	0.13	%
J&R Holding Limited <sup>(3)</sup>	46,703,763	0.53	%
Hung Ching <sup>(4)</sup>	88,261,502	1.01	%

ASE Test is our wholly owned subsidiary. ASE Test's ownership of our common shares is the result of the merger of ASE Chung Li with and into us in August 2004, and subsequent dividends upon shares received in connection with this merger. In order to comply with Singapore Companies Act, a trust was established to hold and dispose our common shares issued to ASE Test, a Singaporean Company, upon completion of the merger. The trustee appointed under such trust arrangement is currently our registered shareholder for our common shares issued to ASE Test. See “—Related Party Transactions.”

ASE Test Taiwan is our wholly owned subsidiary. ASE Test Taiwan's ownership of our common shares is mainly the result of the merger of ASE Material with and into us in August 2004, and subsequent dividends upon shares received in connection with this merger. In order to comply with Singapore Companies Act, a trust had been established to hold and dispose our common shares issued to ASE Test Taiwan, which had been a subsidiary of ASE Test, upon completion of the merger. In December 2014, the trust established to hold the common shares issued to ASE Test Taiwan had been terminated because ASE Test Taiwan was no longer a subsidiary owned by ASE Test and therefore no longer subject to Singapore Companies Act requirements. As a result, ASE Test Taiwan directly owned 10,978,776 of our common shares as of January 31, 2018. See “—Related Party Transactions.”

J&R Holding Limited is our wholly owned subsidiary. J&R Holding Limited's ownership of our common shares is the result of the merger of ASE Chung Li with and into us in August 2004, and subsequent dividends upon shares received in connection with this merger.

Hung Ching is our equity method investee. As of January 31, 2018, we held 26.22% of the outstanding shares of Hung Ching. Hung Ching acquired our common shares in open market transactions, subsequent dividends upon the acquired shares and shares purchase pursuant to the rights offered by the Company.

As of January 31, 2018, none of our major shareholders had voting rights different from those of our other shareholders. We are not aware of any arrangement that may at a subsequent date result in a change of control of us. Furthermore, other than disclosed above, we are not aware of any significant changes in the percentage of ownership held by our major shareholders in 2015, 2016 and 2017.

As of January 31, 2018, a total of 8,739,734,964 common shares were outstanding. With certain limited exceptions, holders of common shares that are not ROC persons are required to hold their common shares through a brokerage account in the ROC. As of January 31, 2018, 581,922,970 common shares were registered in the name of a nominee of Citibank, N.A., the depository under our ADS deposit agreement. Citibank, N.A., has advised us that, as of January



31, 2018, 116,384,303 ADSs, representing 581,921,515 common shares, were held of record by Cede & Co., and 290 ADSs, representing 1,450 common shares, were held by 9 other U.S. persons. The remaining 5 common shares held by Citibank, N.A. for the Company are a result of fractional shares distributed during stock distributions on our common shares underlying the ADSs.

## RELATED PARTY TRANSACTIONS

In recent years, we have awarded cash bonuses to the employees of our subsidiaries as part of their compensation, based in part on our consolidated net income and the subsidiaries' contribution to our consolidated income. We expect to continue this practice in the future.

In order to comply with Singapore law and other applicable laws and regulations, trusts organized under ROC law were established to hold and dispose of our common shares issued to ASE Test and ASE Test Taiwan in connection with the merger of ASE Chung Li and ASE Material into our company in August 2004. Under Section 76(1)(b)(ii) of Singapore's Companies Act, Chapter 50, ASE Test, a Singapore company, may not purport to acquire, directly or indirectly, shares or units of shares in our company, ASE Test's parent company. Pursuant to the applicable trust agreements, the trustee under each trust is (1) the registered owner of our common shares, (2) authorized to exercise all of the rights as a shareholder of our common shares, (3) authorized to sell our common shares, subject to market conditions, when such common shares become available for resale under ROC law and in accordance with volume limitations under ROC law, at its sole discretion; provided such common shares are sold (i) in compliance with ROC laws and regulations, (ii) in an orderly manner in order to minimize the impact on the trading price of our common shares, and (iii) in a manner consistent with its fiduciary duties owed to ASE Test and (4) able to transfer and deliver to ASE Test or ASE Test Taiwan the proceeds from the sale of our common shares and any cash dividends distributed, as the case may be. In February 2010, to complete the tender offer to acquire Universal Scientific, ASE Test transferred 141,808,499 shares to the shareholders of Universal Scientific. Neither ASE Test nor ASE Test Taiwan have any rights with respect to our common shares held in trust pursuant to the applicable trust agreements other than the right to receive the proceeds from the sale of such common shares and cash dividends declared while the shares remain in trust. In December 2014, the trust established to hold the common shares issued to ASE Test Taiwan had been terminated because ASE Test Taiwan was no longer a subsidiary owned by ASE Test and therefore no longer subject to Singapore Companies Act requirements. As a result, ASE Test Taiwan directly owned 10,978,776 of our common shares as of January 31, 2018 and the trust established to hold the common shares issued to ASE Test held 88,200,472 of our common shares.

Table of Contents

In July 2014, we acquired factory-administration building in Chung Li, Taiwan, from Hung Ching for a consideration of NT\$4,540.1 million.

In 2014, a series of construction projects for which we contracted with Fu Hwa Construction Co., Ltd. for the construction of buildings with green design concept and other projects in Nantze Export Processing Zone, Taiwan, have been completed with a total consideration of NT\$350.0 million.

In August 2014, we made the donation of NT\$15.0 million to Social Affairs Bureau of Kaohsiung City Government through ASE Cultural and Educational Foundation. In addition, in order to demonstrate our commitment to environmental protection, in December 2013, our board of directors approved contributions to environmental protection efforts in Taiwan in a total amount of not less than NT\$3,000.0 million, to be made in the next 30 years. For the years ended December 31, 2015, 2016 and 2017, we have made contributions in the amount of NT\$100.0 million (US\$3.4 million) each, respectively, through ASE Cultural and Educational Foundation to fund various environmental projects and our board of directors have resolved in a resolution in January 2018 to contribute NT\$100.0 million (US\$3.4 million) through ASE Cultural and Educational Foundation in environmental projects in 2018.

In June 2015, we acquired the K22 and K23 factory-administration building in Nantze Export Processing Zone, Taiwan, from Hung Ching for a consideration of NT\$2,466.0 million.

In 2015 and 2016, we capitalized NT\$504.6 million and NT\$875.0 million, respectively, for the construction of employee dormitory for which we contracted with Fu Hwa Construction Co., Ltd. in Kaohsiung, Taiwan.

In 2016, we acquired patents and acquired specific technology from Deca Technologies Inc. for a consideration of NT\$403.5 million.

INTERESTS OF EXPERTS AND COUNSEL

Not applicable.

Item 8. Financial Information

## CONSOLIDATED STATEMENTS AND OTHER FINANCIAL INFORMATION

Consolidated financial statements are set forth under “Item 18. Financial Statements.”

### Export Sales

We categorize our revenues geographically based on the country in which the customer is headquartered. Revenues from our export sales were NT\$250,671.4 million, NT\$236,015.4 million and NT\$255,027.6 million (US\$8,604.2 million) in 2015, 2016 and 2017, respectively, which contributed 88.5%, 85.9% and 87.8% of our total sales volume for those periods, respectively. See “Item 4. Information on the Company—Business Overview—Sales and Marketing” for information on our export sales.

## Table of Contents

### Legal Proceedings

#### K7 Plant Wastewater Discharge

On December 20, 2013, the Kaohsiung Environmental Protection Bureau imposed a fine of NT\$102.0 million (the “Administrative Fine”) upon us for alleged violations of the Water Pollution Control Act. We filed an administrative appeal to nullify the Administrative Fine, which however, was dismissed by the Kaohsiung City Government. In August 2014, we appealed to the Kaohsiung High Administrative Court seeking to (i) revoke Kaohsiung City Government’s decision, (ii) lift the administrative penalty imposed on us and (iii) demand a refund of the Administrative Fine. On March 22, 2016, the Kaohsiung High Administrative Court revoked Kaohsiung City Government’s decision and lifted the administrative penalty. Our demand for a refund of the Administrative Fine was dismissed. We appealed to the Supreme Administrative Court on April 14, 2016 against the Kaohsiung High Administrative Court’s unfavorable ruling in dismissing a refund. On June 8, 2017, the Supreme Administrative Court overturned Kaohsiung High Administrative Court’s decision and ordered Kaohsiung Environmental Protection Bureau to refund the Administrative Fine paid by us.

In connection with the same alleged violations at our K7 plant, in October 2014, the Kaohsiung District Court ruled that we were in violation of the ROC Waste Disposal Act and imposed on us a criminal penalty of NT\$3.0 million. We appealed the case to the Taiwan High Court Kaohsiung District Branch in November 2014. On September 29, 2015, the Taiwan High Court Kaohsiung District Branch overturned the decision made by Kaohsiung District Court and found us not guilty and repealed the criminal penalty imposed on us. The verdict was final and not appealable.

The outcome of some of these proceedings is uncertain. Any penalties, fines, damages or settlements made in connection with these criminal, civil, and/or administrative investigations and/or lawsuits may divert management’s attention and resources, which may cause a material adverse effect on our results of operations, financial condition and business. We are also unable to quantify the harm to our reputation should any adverse findings be made against us. See “Item 3. Key Information—Risk Factors—Risks Relating to Our Business—Any environmental claims or failure to comply with any present or future environmental regulations, as well as any fire or other industrial accident, may require us to spend additional funds and may materially and adversely affect our financial condition and results of operations,” “Item 4. Information on the Company—Business Overview—Environmental Matters” and “Item 4. Information on the Company—Property, Plants and Equipment.”

#### Dividends and Dividend Policy

We have historically paid dividends on our common shares with respect to the results of the preceding year following approval by our shareholders at the annual general meeting of shareholders. We have paid annual dividends on our common shares since 1989, except in 2002 and 2006 when we did not pay any dividend due to the losses we incurred

in the 2001 and 2005 fiscal years, respectively.

Table of Contents

The following table sets forth the stock dividends paid during each of the years indicated and related information.

	Cash Dividends Per Common Share	Stock Dividends Per Common Share <sup>(1)</sup>	Total Common Shares Issued as Stock Dividends	Outstanding Common Shares on Record Date <sup>(2)</sup>	Percentage of Outstanding Common Shares Represented by Stock Dividends	
	NT\$	NT\$				
2010	0.36	1.00	549,497,078	5,500,216,994	10.0	%
2011	0.65	1.15	695,735,660	6,055,261,112	11.5	%
2012	0.65	1.40	931,599,554	6,659,893,672	14.0	%
2013	1.05	-	-	7,611,579,786	-	
2014	1.29	(3)	-	7,847,817,646	-	
2015	2.00	-	-	7,900,130,996	-	
2016	1.60	-	-	7,931,725,946	-	
2017	1.40	-	-	8,405,972,044	-	

(1) Stock dividends were paid out from retained earnings and capital surplus. Holders of common shares receive as a stock dividend the number of common shares equal to the NT dollar value per common share of the dividend declared multiplied by the number of common shares owned and divided by the par value of NT\$10 per share. Fractional shares are not issued but are paid in cash.

(2) Aggregate number of common shares outstanding on the record date applicable to the dividend payment. Includes common shares issued in the previous year under our employee bonus plan.

(3) On June 26, 2014, our shareholders approved a cash dividend of NT\$1.30 per share for 2013 earnings. On July 29, 2014, our board of directors resolved to adjust the cash dividend ratio to NT\$1.29411842 because the number of outstanding common shares had changed as a result of the exercise of share options.

In order to meet the needs of our present and future capital expenditures, we anticipate paying both stock and cash dividends in the future. The form, frequency and amount of future cash or stock dividends on our common shares will depend upon our net income, cash flow, financial condition, shareholders' requirement for cash inflow and other factors. According to our Articles of Incorporation, we have a general policy that cash dividend distribution should not be lower than 30% of the total dividend amount and the remainder be distributed as stock dividends. See "Item 10. Additional information—Articles of Incorporation—Dividends and Distributions."

In general, we are not permitted to distribute dividends or make other distributions to shareholders for any year where we did not record net income or retained earnings (excluding reserves). The ROC Company Law also requires that 10% of annual net income (less outstanding taxes and prior years' losses, if any) be set aside as a legal reserve until the accumulated legal reserve equals our paid-in capital.

According to our Articles of Incorporation, the remuneration of our independent directors is set at NT\$3.0 million (US\$0.10 million) per person per year. If our annual net income (after recovering any losses incurred in prior years and deducting the legal reserve and special reserve provisions, making the additions or deductions of the portion of retained earnings that belong to equity investment gains or losses that have been realized through other comprehensive income or losses measured at fair value and deducting other items as required under ROC law, if any) remains, a proposal for the distribution of such amount together with a part or all of the accumulated undistributed profits in the previous years shall be prepared by the board of directors and submit to the shareholders' meeting for resolution. In addition, we set aside 5.25% to 8.25% of net profit before income tax, employees' compensation and remuneration to the directors as employees' compensation and no more than 0.75% as remuneration to the directors. The 5.25% portion is to be distributed to all employees in accordance with our employee compensation distribution rules, while any portion exceeding 5.25% is to be distributed in accordance with rules established by our board of directors to individual employees who have been recognized as having made special contributions to our company. Such employees include those of our subsidiaries.

Holders of ADSs will be entitled to receive dividends, subject to the terms of the deposit agreement, to the same extent as the holders of our common shares. Cash dividends will be paid to the depositary in NT dollars and, except as otherwise provided in the deposit agreement, will be converted by the depositary into U.S. dollars and paid to holders of ADSs according to the terms of the deposit agreement. Stock dividends will be distributed to the depositary and, except as otherwise provided in the deposit agreement, will be distributed by the depositary, in the form of additional ADSs, to holders of ADSs according to the terms of the deposit agreement.

Table of Contents

Holders of outstanding common shares on a dividend record date will be entitled to the full dividend declared without regard to any prior or subsequent transfer of common shares. Holders of outstanding ADSs are entitled to receive dividends, subject to the terms of the deposit agreement, to the same extent as the holders of outstanding common shares.

For information relating to ROC withholding taxes payable on dividends, see “Item 10. Additional Information—Taxation—ROC Taxation—Dividends.”

## SIGNIFICANT CHANGES

Other than as disclosed elsewhere in this annual report, we have not experienced any significant changes since the date of the annual financial statements.

## Item 9. The Offer and Listing

## OFFER AND LISTING DETAILS

Our common shares were first issued in March 1984 and have been listed on the TWSE since July 1989. The TWSE is an auction market where the securities traded are priced according to supply and demand through announced bid and ask prices. As of January 31, 2018, there were an aggregate of 8,739,734,964 of our common shares outstanding. The following table sets forth, for the periods indicated, the high and low closing prices and the average daily volume of trading activity on the TWSE for our common shares and the high and low of the daily closing values of the Taiwan Stock Exchange Index. The closing price for our common shares on the TWSE on March 16, 2018 was NT\$41.75 per share.

	Closing Price per Share		Adjusted Closing Price per Share <sup>(1)</sup>		Average Daily Trading Volume (in thousands of shares)	Taiwan Stock Exchange Index	
	High	Low	High	Low		High	Low
	NT\$	NT\$	NT\$	NT\$			
2013	30.65	23.60	24.38	16.28	24,598	8,623.4	7,616.6
2014	41.00	26.80	34.73	20.53	25,609	9,569.2	8,264.5



Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

2015	47.75	30.00	42.77	27.02	28,467	9,973.1	7,410.3
2016	39.60	28.65	37.42	25.67	17,859	9,392.7	7,664.0
First Quarter	38.30	33.75	36.92	32.37	17,321	8,812.7	7,664.0
Second Quarter	36.95	28.65	35.57	27.27	25,701	8,716.3	8,053.7
Third Quarter	39.60	34.60	38.22	33.22	17,249	9,284.6	8,575.8
Fourth Quarter	38.80	32.20	37.42	30.82	11,453	9,392.7	8,931.0
2017	41.75	32.80	41.75	31.42	16,390	10,854.6	9,272.9
First Quarter	39.90	32.80	38.52	31.42	16,696	9,972.5	9,272.9
Second Quarter	39.40	37.00	38.02	35.62	12,602	10,514.0	9,632.7
Third Quarter	40.85	35.60	39.47	34.22	18,518	10,631.6	10,225.3
Fourth Quarter	41.75	36.35	41.75	36.35	17,553	10,854.6	10,355.8
September	37.15	35.60	37.15	35.60	23,850	10,631.6	10,257.0
October	38.10	36.35	38.10	36.35	12,208	10,793.8	10,465.2
November	41.75	36.40	41.75	36.40	23,214	10,854.6	10,560.4
December	39.05	37.35	39.05	37.35	16,509	10,651.1	10,355.8
2018							
First Quarter							
January	42.30	38.30	42.30	38.30	16,799	11,253.1	10,710.7
February	41.70	37.90	41.70	37.90	28,974	11,160.3	10,371.8
March (through March 16, 2018)	43.00	40.00	43.00	40.00	19,586	11,095.6	10,642.9

As adjusted retroactively by the TWSE to give effect to stock dividends and cash dividends paid in the periods (1) indicated. See “Item 8. Financial Information—Consolidated Statements and Other Financial Information—Dividends and Dividend Policy.”

Table of Contents

The performance of the TWSE has in recent years been characterized by extreme price volatility. There are currently limits on the range of daily price movements on the TWSE. In the case of equity securities traded on the TWSE, such as our common shares, fluctuations in the price of a particular security may not exceed a 10.0% change either above or below the previous day's closing price of such security.

Our ADSs have been listed on the NYSE under the symbol "ASX" since September 26, 2000. The outstanding ADSs are identified by the CUSIP number 00756M404. As of January 31, 2018, a total of 116,384,303 ADSs were outstanding. The following table sets forth, for the periods indicated, the high and low closing prices and the average daily volume of trading activity on the NYSE for our ADSs and the highest and lowest of the daily closing values of the New York Stock Exchange Index. The closing price for our ADSs on the NYSE on March 16, 2018 was US\$7.22 per ADS.

	Closing Price per ADS		Adjusted Average Closing Price per ADS <sup>(1)</sup>		Adjusted Average Daily Trading Volume (in thousands of ADSs)	New York Stock Exchange Index	
	High	Low	High	Low		High	Low
	US\$	US\$	US\$	US\$			
2013	5.35	3.91	4.48	3.00	746	10,400.3	8,604.4
2014	6.87	4.45	5.76	3.73	752	11,104.7	9,741.6
2015	7.89	4.69	6.85	4.34	1,405	11,239.7	9,601.4
2016	6.21	4.41	5.92	4.08	916	11,237.2	9,029.9
First Quarter	5.87	4.95	5.43	4.58	1,015	10,237.0	9,029.9
Second Quarter	5.78	4.41	5.34	4.08	1,439	10,641.2	9,973.5
Third Quarter	6.21	5.35	5.92	4.95	633	10,890.8	10,409.5
Fourth Quarter	6.12	4.92	5.90	4.74	577	11,237.2	10,289.3
2017	7.07	5.09	7.07	4.91	1,024	12,853.1	11,148.8
First Quarter	6.62	5.09	6.38	4.91	1,179	11,661.2	11,148.8
Second Quarter	6.54	6.04	6.30	5.82	923	11,833.3	11,324.5
Third Quarter	6.65	5.86	6.41	5.86	907	12,209.2	11,699.8
September	6.23	5.86	6.23	5.86	883	12,209.2	11,827.2
Fourth Quarter	7.07	6.10	7.07	6.10	893	12,853.1	12,220.3
October	6.39	6.15	6.39	6.15	639	12,430.5	12,264.7
November	7.07	6.10	7.07	6.10	1,081	12,627.8	12,220.3
December	6.55	6.32	6.55	6.32	975	12,853.1	12,532.4
2018							
First Quarter							
January	7.32	6.59	7.32	6.59	986	13,637.0	12,902.7
February	7.12	6.55	7.12	6.55	799	13,382.0	12,270.7
March (through March 16, 2018)	7.48	6.91	7.48	6.91	984	12,918.8	12,518.7

(1) As adjusted retroactively to give effect to stock dividends and cash dividends paid in the periods indicated.

#### PLAN OF DISTRIBUTION

Not applicable.

#### MARKETS

The principal trading market for our common shares is the TWSE and the principal trading market for ADSs representing our common shares is the NYSE.

Table of Contents

SELLING SHAREHOLDERS

Not applicable.

DILUTION

Not applicable.

EXPENSES OF THE ISSUE

Not applicable.

Item 10. Additional Information

SHARE CAPITAL

Not applicable.

ARTICLES OF INCORPORATION

General

We are a company limited by shares organized under the laws of the ROC. Our organizational document is our Articles of Incorporation. We have no by-laws.

Our Articles of Incorporation provide, in Article 2, that we may engage in the following types of business:

- the manufacture, assembly, processing, testing and export of various types of integrated circuitry;
- the research, development, design and manufacture, assembly, processing, testing and export of various computers, electronics, communications, information products and their peripheral products;
- general import and export trading (excluding businesses that require trading permits);
- the manufacture of electronic parts and components;
- the manufacture of mechanical and electronic devices and materials (including integrated circuit leadframes, BGA substrates and flip-chip substrates);
- wholesale and retail sales of electronic materials;
- technical support and consulting service for integrated circuit leadframes, BGA substrates and flip-chip substrates;
- leasing; and
- except any business requiring a special permit, any business not prohibited or restricted by law or regulation.

We were incorporated on March 23, 1984 as a company limited by shares under the ROC Company Law. Our authorized share capital registered with the Kaohsiung Export Processing Zones Administration was NT\$95 billion, divided into 9,500 million common shares, 8,739,734,964 of which were outstanding as of January 31, 2018. Our authorized share capital under our Articles of Incorporation is NT\$100 billion, divided into 10 billion common shares. We do not have any equity in the form of preference shares or otherwise outstanding as of the date of this annual report.

## Table of Contents

Subject to limited exceptions, with the approval of our board of directors and the FSC, we may grant stock options to our employees, provided that NT\$8,000 million of our authorized capital (800 million common shares) is reserved for employee stock options. The total number of shares to be issued under all option plans, together with all restricted shares issued to employees, shall not exceed 15% of our outstanding common shares. Unless otherwise approved by the shareholders' meeting, the exercise price of an option shall not be less than the closing price of our common shares on the TWSE on the grant date of the option. As of January 31, 2018, we had granted 294,269,500 options pursuant to employee stock option plans established on April 20, 2010 and April 17, 2015 to our full-time employees, including our domestic and foreign subsidiaries. See "Item 6. Directors, Senior Management and Employees—Compensation—ASE Inc. Employee Bonus and Stock Option Plans."

## Directors

Our Articles of Incorporation provide that, we are to have 11 to 15 directors with tenures of three years who are elected at a shareholders' meeting. In addition, three of our directors will be required to be independent directors. Our audit committee replaced the function of supervisors in accordance with the ROC Securities and Exchange Act to exercise the powers and duties of supervisors starting from June 2015.

There is no minimum amount of shares necessary to stand for election to a directorship. Many of our directors are representatives appointed by corporate shareholders which appoint individual representatives. Re-elections are allowed. The board of directors has certain powers and duties, including devising operations strategy, proposing to distribute dividends or make up losses, proposing to increase or decrease capital, reviewing material internal rules and contracts, hiring and discharging the general manager, establishing and dissolving branch offices, reviewing budgets and financial statements and other duties and powers granted by or in accordance with the ROC Company Law, our Articles of Incorporation or shareholders resolutions.

The board of directors is constituted by the directors, who elect a chairman from among the directors to preside over the meeting of the board. Meetings of the board may be held in the ROC or by videoconference. A director may appoint another director to attend a meeting and vote by proxy, but a director may accept only one proxy.

## Dividends and Distributions

In general, we are not permitted to distribute dividends or make other distributions to shareholders in any given year in which we did not record net income or retained earnings (excluding reserves). The ROC Company Law also requires that 10% of annual net income (less prior years' losses, if any, and applicable income taxes) be set aside as a legal reserve until the accumulated legal reserve equals our paid-in capital.

According to our Articles of Incorporation, the remuneration of our independent directors is set at NT\$3.0 million (US\$0.10 million) per person per year. If our annual net income (after recovering any losses incurred in prior years and deducting the legal reserve and special reserve provisions, making the additions or deductions of the portion of retained earnings that belong to equity investment gains or losses that have been realized through other comprehensive income or losses measured at fair value and deducting other items as required under ROC law, if any) remains, a proposal for the distribution of such amount together with a part or all of the accumulated undistributed profits in the previous years shall be prepared by the board of directors and submit to the shareholders' meeting for resolution. In addition, we set aside 5.25% to 8.25% of net profit before income tax, employees' compensation and remuneration to the directors as employees' compensation and no more than 0.75% as remuneration to the directors. The 5.25% portion is to be distributed to all employees in accordance with our employee compensation distribution rules, while any portion exceeding 5.25% is to be distributed in accordance with rules established by our board of directors to individual employees who have been recognized as having made special contributions to our company. Such employees include those of our subsidiaries.

At the annual general meeting of shareholders, our board of directors submits to the shareholders for their approval any proposal for the distribution of dividends or the making of any other distribution to shareholders from our net income for the preceding fiscal year. All common shares outstanding and fully paid as of the relevant record date are entitled to share equally in any dividend or other distribution so approved. Dividends may be distributed in cash, in the form of common shares or a combination of the two, as determined by the shareholders at the meeting. According to our Articles of Incorporation, we have a general policy that cash dividend distribution should not be lower than 30% of the total dividend amount and the remainder be distributed as stock dividends. See "Item 8. Financial Information—Consolidated Statements and Other Financial Information—Dividends and Dividend Policy."

## Table of Contents

We are also permitted to make distributions to our shareholders in cash or in the form of common shares from reserves if we have no accumulated loss. However, the distribution payable out of our legal reserve can only come from the amount exceeding 25% of the total paid-in capital.

For information on the dividends we paid in recent years, see “Item 8. Financial Information—Consolidated Statements and Other Financial Information—Dividends and Dividend Policy.” For information as to ROC taxes on dividends and distributions, see “—Taxation—ROC Taxation—Dividends.”

## Changes in Share Capital

Under ROC Company Law, any change in the authorized share capital of a company limited by shares requires an amendment to its Articles of Incorporation, which in turn requires approval at the shareholders’ meeting. In the case of a public company such as ourselves, we must also obtain the approval of, or submit a report to, the FSC and the Kaohsiung Export Processing Zone Administration. Authorized but unissued common shares may be issued, subject to applicable ROC law, upon terms as our board of directors may determine. Our authorized share capital registered with the Kaohsiung Export Processing Zones Administration was NT\$95 billion, divided into 9,500 million common shares with a face value of NT\$10.0 per share as of January 31, 2018. Our authorized share capital under our Articles of Incorporation is NT\$100 billion, divided into 10 billion common shares. There were 500 million common shares included in our authorized shares that are currently not registered with the Kaohsiung Export Processing Zones Administration. We will complete the registration with the Kaohsiung Export Processing Zones Administration if and when our total issued share capital equals or exceeds NT\$95 billion.

## Preemptive Rights

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

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



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

#### Meetings of Shareholders

We are required to hold an annual general meeting of our shareholders within six months following the end of each fiscal year. These meetings are generally held in Kaohsiung, Taiwan. Any shareholder who holds 1% or more of our issued and outstanding shares may submit one written proposal for discussion at our annual general meeting. Extraordinary shareholders' meetings may be convened by resolution of the board of directors or by the board of directors upon the written request of any shareholder or shareholders who have held 3% or more of the outstanding common shares for a period of one year or longer. Shareholders' meetings may also be convened by member(s) of the audit committee. Notice in writing of meetings of shareholders, stating the place, time and purpose, must be dispatched to each shareholder at least 30 days, in the case of annual general meetings, and 15 days, in the case of extraordinary meetings, before the date set for each meeting. A majority of the holders of all issued and outstanding common shares present at a shareholders' meeting constitutes a quorum for meetings of shareholders.

Table of Contents

Voting Rights

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

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

amendment to the Articles of Incorporation, including increase of authorized share capital and any changes of the rights of different classes of shares;

execution, amendment or termination of any contract through which the company leases its entire business to others, or the company appoints others to operate its business or the company operates its business with others on a continuous basis;

transfer of entire business or assets or a substantial part of its business or assets;

acquisition of the entire business or assets of any other company, which would have a significant impact on the company's operations;

distribution of any stock dividend;

dissolution, merger or spin-off of the company;

issuance of restricted shares to employees; and

removal of the directors.

However, in the case of a listed company such as us, the resolution may be adopted by the holders of at least two-thirds of our issued and outstanding common shares represented at a shareholders' meeting at which the holders of at least a majority of all issued and outstanding common shares are present.

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

Holders of ADSs do not have the right to exercise voting rights with respect to the underlying common shares, except as described in the deposit agreement.

#### Other Rights of Shareholders

Under the ROC Company Law, dissenting shareholders are entitled to appraisal rights in certain major corporate actions such as a proposed amalgamation by the company. If agreement with the company cannot be reached, dissenting shareholders may seek a court order for the company to redeem all of their shares. Shareholders may exercise their appraisal rights by serving written notice on the company prior to or at the related shareholders' meeting and/or by raising and registering an objection at the shareholders' meeting. In addition to appraisal rights, shareholders have the right to sue for the annulment of any resolution adopted at a shareholders' meeting where the procedures were legally defective within 30 days after the date of the shareholders' meeting. One or more shareholders who have held 3% or more of the issued and outstanding shares of a company for a period of one year or longer may require an independent director to bring a derivative action on behalf of the company against a director as a result of the director's unlawful actions or failure to act.

Table of Contents

Rights of Holders of Deposited Securities

Except as described below, holders of ADSs generally have no right under the deposit agreement to instruct the depositary to exercise the voting rights for our common shares represented by the ADSs. Instead, by accepting ADSs or any beneficial interest in ADSs, holders of ADSs are deemed to have authorized and directed the depositary to appoint our chairman or his designee to represent them at our shareholders' meetings and to vote our common shares deposited with the custodian according to the terms of the deposit agreement.

The depositary will mail to holders of ADSs any notice of shareholders' meeting received from us together with information explaining how to instruct the depositary to exercise the voting rights of the securities represented by ADSs.

If we fail to timely provide the depositary with an English language translation of our notice of meeting or other materials related to any meeting of owners of common shares, the depositary will endeavor to cause all the deposited securities represented by ADSs to be present at the applicable meeting, insofar as practicable and permitted under applicable law, but will not cause those securities to be voted.

If the depositary timely receives voting instructions from owners of at least 51.0% of the outstanding ADSs to vote in the same direction regarding one or more resolutions to be proposed at the meeting, including election of directors, the depositary will notify our chairman or his designee to attend the meeting and vote all the securities represented by the holders' ADSs in accordance with the direction received from owners of at least 51.0% of the outstanding ADSs.

If we have timely provided the depositary with the materials described in the deposit agreement and the depositary has not timely received instructions from holders of at least 51.0% of the outstanding ADSs to vote in the same direction regarding any resolution to be considered at the meeting, then, holders of ADSs will be deemed to have authorized and directed the depositary bank to give a discretionary proxy to our chairman or his designee to attend and vote at the meeting our common shares represented by the ADSs in any manner, our chairman or his designee may wish, which may not be in the interests of holders.

The ability of the depositary to carry out voting instructions may be limited by practical and legal limitations and the terms of the securities on deposit. We cannot assure ADS holders that they will receive voting materials in time to enable them to return voting instructions to the depositary in a timely manner.

While shareholders who own 1% or more of our outstanding shares are entitled to submit one proposal to be considered at our annual general meetings, only holders representing at least 51% of our ADSs outstanding at the

relevant record date are entitled to submit one proposal to be considered at our annual general meetings. Hence, only one proposal may be submitted on behalf of all ADS holders.

#### Register of Shareholders and Record Dates

Our share registrar, President Securities Corp., maintains our register of shareholders at its offices in Taipei, Taiwan. Under the ROC Company Law and our Articles of Incorporation, we may, by giving advance public notice, set a record date and close the register of shareholders for a specified period in order for us to determine the shareholders or pledgees that are entitled to rights pertaining to our common share. The specified period required is as follows:

- annual general meeting—60 days;

- extraordinary shareholders' meeting—30 days; and

- relevant record date for distribution of dividends, bonuses or other interests—5 days.

Table of Contents

Annual Financial Statements

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

Transfer of Common Shares

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

Acquisition of Common Shares by ASE Inc.

Under the ROC Securities and Exchange Act, we may purchase our own common shares for treasury stock under limited circumstances, including:

· to transfer shares to our employees;

· to deliver shares upon the conversion or exercise of bonds with warrants, preferred shares with warrants, convertible bonds, convertible preferred shares or warrants issued by us; and

· to maintain our credit and our shareholders' equity, provided that the shares so purchased shall be canceled.

We may purchase our common shares on the TWSE or by means of a public tender offer. These transactions require the approval of a majority of our board of directors at a meeting in which at least two-thirds of the directors are in attendance. The total amount of common shares purchased for treasury stock may not exceed 10.0% of the total issued shares. In addition, the total cost of the purchased shares shall not exceed the aggregate amount of our retained earnings, any premium from share issuances and the realized portion of our capital reserve.

We may not pledge or hypothecate any of our shares purchased by us. In addition, we may not exercise any shareholders' right attaching to such shares. In the event that we purchase our shares on the TWSE, our affiliates, directors, managers, and their respective spouses and minor children and/or nominees are prohibited from selling any of our shares during the period in which we are purchasing our shares.

Pursuant to the ROC Company Law, an entity in which our company directly or indirectly owns more than 50.0% of the voting shares or paid-in capital, which is referred to as a controlled entity, may not purchase our shares. Also, if our company and a controlled entity jointly own, directly or indirectly, more than 50.0% of the voting shares or paid-in capital of another entity, which is referred to as a third entity, the third entity may not purchase shares in either our company or a controlled entity.

### Liquidation Rights

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

### Transfer Restrictions

### Substantial Shareholders

The ROC Securities and Exchange Act currently requires:

Table of Contents

each director, manager, or substantial shareholder (that is, a shareholder who holds more than 10.0% shares of a company), and their respective spouses, minor children or nominees, to report any change in that person's shareholding to the issuer of the shares and the FSC; and

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

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

0.2% of the outstanding shares of the company in the case of a company with no more than 30 million outstanding shares; or

0.2% of 30 million shares plus 0.1% of the outstanding shares exceeding 30 million shares in the case of a company with more than 30 million outstanding shares; or

in any case, 5.0% of the average trading volume (number of shares) on the TWSE for the ten consecutive trading days preceding the reporting day on which the director, manager or substantial shareholder reports the intended share transfer to the FSC.

These restrictions do not apply to sales or transfers of our ADSs.

**MATERIAL CONTRACT**

**Joint Share Exchange Agreement between ASE and SPIL**

ASE and SPIL have entered into the Joint Share Exchange Agreement pursuant to which a holding company, ASE Holding, will be formed by means of a statutory share exchange, and ASE Holding will (i) acquire all issued shares of ASE in exchange for shares of ASE Holding using the Exchange Ratio as described below, and (ii) acquire all issued shares of SPIL using the Cash Consideration as described below. Upon the consummation of the Share Exchange, ASE and SPIL will become wholly owned subsidiaries of ASE Holding concurrently. Subject to the Share Exchange and the Joint Share Exchange Agreement being approved by shareholders of ASE and SPIL, respectively, and upon the satisfaction of the other conditions for completing the Share Exchange, ASE Holding will be formed.



Pursuant to the terms and subject to the conditions set forth in the Joint Share Exchange Agreement, at the effective time of the Share Exchange (the “Effective Time”):

i. for SPIL shareholders:

each SPIL common share, par value NT\$10 per share, issued immediately prior to the Effective Time (including SPIL’s treasury shares and the common shares of SPIL beneficially owned by ASE), will be transferred to ASE Holding in consideration for the right to receive NT\$51.2, which represents NT\$55, *minus* a cash dividend and a return of capital reserve of NT\$3.8 per common share of SPIL distributed by SPIL on July 1, 2016, payable in cash in NT dollars, without interest and net of any applicable withholding taxes (“SPIL Common Shares Cash Consideration”); and

each SPIL American depositary share, currently representing five common shares of SPIL will be cancelled in exchange for the right to receive through JPMorgan Chase Bank, N.A., as depositary for the SPIL American depositary shares (“SPIL Depositary”), the US dollar equivalent of NT\$256 (representing five times of the SPIL Common Shares Cash Consideration) *minus* (i) all processing fees and expenses per SPIL American depositary shares in relation to the conversion from NT dollars into US dollars, and (ii) US\$0.05 per SPIL American depositary shares cancellation fees pursuant to the terms of the deposit agreement dated January 6, 2015 by and among SPIL, SPIL Depositary and the holders and beneficial owners from time to time of the SPIL American depositary shares issued thereunder, payable in cash in US dollars, without interest and net of any applicable withholding taxes (“SPIL ADS Cash Consideration,” together with the SPIL Common Shares Cash Consideration, “Cash Consideration”).

Table of Contents

The Cash Consideration will be subject to adjustments if SPIL issues shares or pays cash dividends during the period from the execution date of the Joint Share Exchange Agreement to the Effective Time, provided, however, that the Cash Consideration shall not be subject to adjustment since the aggregate amount of the cash dividends distributed by SPIL in fiscal year 2017 is less than 85% of its after-tax net profit for fiscal year 2016.

ii. for ASE shareholders:

each common share of ASE, par value NT\$10 per share, issued immediately prior to the Effective Time (including ASE's treasury shares), will be transferred to ASE Holding in consideration for the right to receive 0.5 ASE Holding common shares, par value NT\$10 per share; and

each ASE ADS, currently representing five common shares of ASE, will represent the right to receive 1.25 ASE Holding American depositary shares, each representing two ASE Holding common shares upon surrender for cancellation to Citibank, N.A., as depositary for the ASE ADSs, after the Effective Time. The ratio at which the common shares of ASE will be exchanged for the common shares of ASE Holding and ASE ADSs will be exchanged for ASE Holding American depositary shares is hereinafter referred to as the "Exchange Ratio".

Under Republic of China law, if any fractional ASE Holding common shares representing less than one common share would otherwise be allotted to former holders of ASE common shares in connection with the Share Exchange, those fractional shares will not be issued to those shareholders. Pursuant to the Joint Share Exchange Agreement, ASE will aggregate the fractional entitlements and sell the aggregated ASE common shares using the closing price of ASE common shares on the TWSE on the ninth ROC Trading Day prior to the Effective Time, to an appointee of the Chairman of ASE Holding. The cash proceeds from the sale will be distributed to the former holders of ASE common shares by ASE Holding on a proportionate basis in accordance with their respective fractions at the Effective Time.

As approved at the extraordinary general shareholders' meeting of ASE shareholders on February 12, 2018, ASE Holding's share capital will be NT\$50,000,000,000.

On March 26, 2018, TWSE approved the delisting of common shares of ASE and SPIL on April 30, 2018 and the listing of common shares of ASE Holding on the same day.

## FOREIGN INVESTMENT IN THE ROC

Historically, foreign investment in the ROC securities market has been restricted. Since 1983, the ROC government has from time to time enacted legislation and adopted regulations to permit foreign investment in the ROC securities market.

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

Under the Regulations, foreign investors (other than PRC persons) are classified as either “onshore foreign investors” or “offshore foreign investors” according to their respective geographical location. Both onshore and offshore foreign investors are allowed to invest in ROC securities after they register with the TWSE or the Taiwan Futures Exchange. The Regulations further classify foreign investors into foreign institutional investors and foreign individual investors. “Foreign institutional investors” refer to those investors incorporated and registered in accordance with foreign laws outside of the ROC (i.e., offshore foreign institutional investors) or their branches set up and recognized within the ROC (i.e., onshore foreign institutional investors). Offshore overseas Chinese and foreign individual investors may be subject to a maximum investment ceiling that will be separately determined by the FSC, after consultation with the Central Bank of the Republic of China (Taiwan). Currently, there is no maximum investment ceiling for offshore overseas Chinese and foreign individual investors. On the other hand, foreign institutional investors are not subject to any ceiling for investment in the ROC securities market.

Table of Contents

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

Foreign investors (other than PRC persons) who wish to make (i) direct investments in the shares of ROC private companies or (ii) investment in 10.0% or more of the equity interest of a ROC company listed on the TWSE or the Taipei Exchange in any single transaction, are required to submit a foreign investment approval application to the MOEAIC or other applicable government authority. The MOEAIC or such other government authority reviews each foreign investment approval application and approves or disapproves each application after consultation with other governmental agencies (such as the Central Bank of the Republic of China (Taiwan) and the FSC).

Under current ROC law, any non-ROC person possessing a foreign investment approval may remit capital for the approved investment and is entitled to repatriate annual net profits, interest and cash dividends attributable to the approved investment. Dividends attributable to such investment may be repatriated upon submitting certain required documents to the remitting bank, and investment capital and capital gains attributable to such investment may be repatriated after approvals of the MOEAIC or other government authorities have been obtained.

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

The FSC announced the PRC Regulations on April 30, 2009. According to the PRC Regulations, a PRC QDII is allowed to invest in ROC securities (including less than 10.0% shareholding of a ROC company listed on the TWSE or the Taipei Exchange) provided that the total investment amount of any QDII does not exceed US\$500 million. The custodians of QDIIs must apply with the TWSE for the remittance amount for each QDII, which cannot exceed US\$100 million, and QDII can only invest in ROC securities at an amount approved by the TWSE. In addition, QDIIs are currently prohibited from investing in certain industries, and their investment in any company of certain other industries is restricted to a certain percentage pursuant to a list promulgated by the FSC and amended from time to time. PRC investors other than QDII are prohibited from making investments in a ROC company listed on the TWSE or the Taipei Exchange if the investment is less than 10.0% of the equity interest of such ROC company.

In addition to investments permitted under the PRC Regulations, PRC investors who wish to make (i) direct investment in the shares of ROC private companies or (ii) investments, individually or in the aggregate, in 10.0% or more of the equity interest of a ROC company listed on the TWSE or the Taipei Exchange, are required to submit an investment approval application to the MOEAIC or other government authority. The MOEAIC or such other government authority reviews each investment approval application and approves or disapproves each application after consultation with other governmental agencies.

In addition to the general restriction against direct investment by PRC investors in securities of ROC companies, PRC investors may only invest in certain industries on the “positive list” promulgated by the Executive Yuan. Furthermore, a PRC investor who wishes to be elected as a ROC company’s director or supervisor shall submit an investment approval application to the MOEAIC or other government authority for approval.

## EXCHANGE CONTROLS

### ROC Exchange Controls

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

## Table of Contents

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

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

## TAXATION

### ROC Taxation

The following discussion describes the material ROC tax consequences of the ownership and disposition of our common shares or ADSs to a non-resident individual or non-resident entity that owns our common shares or ADSs (referred to here as a “non-ROC holder”). As used in the preceding sentence, a “non-resident individual” is a non-ROC national who owns our common shares or ADSs and is not physically present in the ROC for 183 days or more during any calendar year, and a “non-resident entity” is a corporation or a non-corporate body that owns our common shares or ADSs, is organized under the laws of a jurisdiction other than the ROC and has no fixed place of business or business agent in the ROC.

### Dividends

Dividends (whether in cash or common shares) declared by us out of retained earnings and distributed to a non-ROC holder are subject to ROC withholding tax at 21% (unless a preferable tax rate is provided under a tax treaty between the ROC and the jurisdiction where the non-ROC holder is a resident) on the amount of the distribution (in the case of cash dividends) or on the par value of the distributed common shares (in the case of stock dividends). Furthermore, if and when we distribute any dividends in the year of 2018, for the portion of dividends paid out of those retained earnings on which we had paid 10% ROC retained earnings tax, a credit of up to 5% of such portion of dividends may

be offset against the 21% withholding tax. Starting the year of 2019, no retained earnings tax paid can be offset against the 21% withholding tax.

Distributions of common shares or cash out of capital reserves will not be subject to withholding tax, except under limited circumstances.

#### Capital Gains

Starting from January 1, 2016, capital gains realized upon the sale or other disposition of common shares are exempt from ROC income tax.

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

## Table of Contents

### Securities Transaction Tax

Securities transaction tax will be imposed on the seller at the rate of 0.3% of the transaction price upon a sale of common shares. Transfers of ADSs are not subject to ROC securities transaction tax. During the one-year period from April 28, 2017 to April 27, 2018, the tax rate for day trading of shares meeting certain criteria is reduced to 0.15%. The Executive Yuan has forwarded a proposal to the Legislative Yuan to extend the aforesaid reduction in tax rate for another three years until April 27, 2021, which is currently pending lawmakers' review and approval.

### Subscription Rights

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

### Estate and Gift Tax

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

### Tax Treaty

At present, the ROC has income tax treaties with Indonesia, Singapore, New Zealand, Australia, the United Kingdom, South Africa, Gambia, Swaziland, Malaysia, Macedonia, the Netherlands, Senegal, Sweden, Belgium, Denmark, Israel, Vietnam, Paraguay, Hungary, France, India, Slovakia, Switzerland, Germany, Thailand, Kiribati, Luxembourg, Austria, Italy, Japan, Canada and Poland. These tax treaties may limit the rate of ROC withholding tax on dividends paid with respect to common shares issued by ROC companies. A non-ROC holder of ADSs may or may not be considered as the beneficial owner of common shares for the purposes of such treaties. Accordingly, holders of ADSs



who wish to apply a reduced withholding tax rate that is provided under a tax treaty should consult their own tax advisers concerning such application. The United States does not have an income tax treaty with the ROC.

#### United States Federal Income Taxation

The following discussion describes the material U.S. federal income tax consequences of the ownership and disposition of our common shares or ADSs to those U.S. Holders described below who hold such common shares or ADSs as capital assets for U.S. federal income tax purposes. As used herein, a “U.S. Holder” is a beneficial owner of our common shares or ADSs that is for U.S. federal income tax purposes:

- a citizen or individual resident of the United States;

- a corporation, or other entity taxable as a corporation, created or organized under the laws of the United States or of any political subdivision of the United States; or

- an estate or trust the income of which is subject to U.S. federal income taxation regardless of its source.

- This discussion assumes that we are not a passive foreign investment company, as discussed below.

Table of Contents

This discussion does not address all of the tax consequences that may be relevant in light of a U.S. Holder's particular circumstances. In particular, it does not address all of the tax consequences that may be relevant to holders subject to special rules, including:

- persons subject to the alternative minimum tax;
- persons subject to taxation under the provisions of the Internal Revenue Code of 1986, as amended (the "Code"), known as the Medicare contribution tax;
- insurance companies;
- tax-exempt entities, including "individual retirement accounts" or "Roth IRAs";
- dealers or traders in securities who use a mark-to-market method of accounting for U.S. federal income tax purposes;
- certain financial institutions;
- partnerships or other entities classified as partnerships for U.S. federal income tax purposes;
- persons holding common shares or ADSs in connection with a trade or business conducted outside of the U.S.;
- persons who hold or will hold common shares or ADSs as part of a straddle, hedge, conversion transaction, integrated transaction or similar transaction;
- persons whose functional currency for U.S. federal income tax purposes is not the U.S. dollar;
- persons who own or are deemed to own 10% or more of the voting power or value of our stock; or
- persons who acquired our common shares or ADSs pursuant to the exercise of any employee stock option or otherwise as compensation.

If an entity that is classified as a partnership for U.S. federal income tax purposes holds our common shares or ADSs, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and the activities of the partnership. Partnerships holding our common shares or ADSs and partners in such partnerships should consult their tax advisers as to the particular U.S. federal income tax consequences of holding and disposing of our common shares or ADSs.

This discussion is based on the Code, final, temporary and proposed Treasury regulations, administrative pronouncements and judicial decisions, all as of the date hereof. These laws and regulations are subject to change, possibly with retroactive effect. This discussion is also based in part on representations by the depositary bank and assumes that each obligation under the Deposit Agreement and any related agreement will be performed in accordance with its terms.

In general, for U.S. federal income tax purposes, a U.S. Holder who owns ADSs should be treated as the owner of the common shares represented by the ADSs. Accordingly, no gain or loss should be recognized if a U.S. Holder exchanges ADSs for the common shares represented by those ADSs.

The U.S. Treasury has expressed concerns that parties to whom American depositary shares are released before delivery of shares to the depositary bank (“pre-release”), or intermediaries in the chain of ownership between holders and the issuer of the security underlying the American depositary shares, may be taking actions that are inconsistent with the claiming of foreign tax credits by the holders of American depositary shares. Such actions would also be inconsistent with the claiming of the preferential rates of tax applicable to dividends received by certain non-corporate U.S. Holders. Accordingly, the creditability of ROC taxes and the availability of the preferential tax rates for dividends received by certain non-corporate U.S. Holders, both described below, could be affected by actions that may be taken by such parties or intermediaries.

## Table of Contents

U.S. Holders should consult their tax advisers with regard to the application of the U.S. federal income tax laws to their common shares or ADSs as well as any tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction.

### Dividends

Distributions paid on our common shares or ADSs (other than certain *pro rata* distributions of our common shares to all shareholders, including holders of ADSs), including the amount of any ROC taxes withheld thereon, reduced by any credit against the withholding tax on account of the 10% retained earnings tax imposed on us, generally will constitute foreign-source dividend income to the extent paid out of our current or accumulated earnings and profits as determined in accordance with U.S. federal income tax principles. Because we do not maintain calculations of our earnings and profits under U.S. federal income tax principles, we expect that distributions generally will be reported to U.S. Holders as dividends. The amount a U.S. Holder will be required to include in income for any dividend paid in NT dollars will be equal to the U.S. dollar value of the NT dollars paid, calculated by reference to the exchange rate in effect on the date the payment is received by the depository (in the case of ADSs) or by a U.S. Holder (in the case of common shares), regardless of whether the payment is in fact converted into U.S. dollars on the date of receipt. If a U.S. Holder does not convert the NT dollars so received into U.S. dollars on the date of receipt, any gain or loss recognized on a subsequent sale or other disposition of the NT dollars generally will be U.S.-source ordinary income or loss. The amount of any taxable distribution of property other than cash will be the fair market value of such property on the date of distribution. Dividends will not be eligible for the dividends-received deduction generally available to U.S. corporations under the Code.

Subject to applicable limitations and the discussion above regarding concerns expressed by the U.S. Treasury, under current law, certain dividends paid by qualified foreign corporations to certain non-corporate U.S. Holders are taxable at the preferential rates applicable to long-term capital gain. A foreign corporation is treated as a qualified foreign corporation with respect to dividends paid by that corporation on shares (or ADSs representing such shares) that are readily tradable on a securities market in the United States, such as the NYSE, where our ADSs are traded. U.S. Holders should consult their tax advisers to determine whether these preferential rates may apply to dividends they receive and whether they are subject to any special rules that limit their ability to be taxed at these preferential rates.

Subject to applicable limitations and restrictions, some of which vary depending upon the U.S. Holder's circumstances, and the discussion above regarding concerns expressed by the U.S. Treasury, the ROC taxes withheld from dividend distributions, reduced by any credit against the withholding tax which is paid by us on account of the 10% retained earnings tax, will be eligible for credit against the U.S. Holder's U.S. federal income tax liability. The limitation on foreign taxes eligible for credit is calculated separately with respect to specific classes of income. The rules governing foreign tax credits are complex and, therefore, U.S. Holders should consult their tax advisers regarding the availability of foreign tax credits in their particular circumstances. Instead of claiming a credit, U.S. Holders may, at their election, deduct otherwise creditable ROC taxes in computing their taxable income, subject to generally applicable limitations under U.S. law. An election to deduct foreign taxes instead of claiming foreign tax credits applies to all taxes paid or accrued in the taxable year to foreign countries and possessions of the United States.

Certain *pro rata* distributions of common shares by a company to its shareholders, including Holders of ADSs, will not be subject to U.S. federal income tax. Accordingly, these distributions will not give rise to U.S. federal income against which the ROC tax imposed on these distributions may be credited. U.S. Holders should consult their tax advisers as to whether any ROC tax imposed on such distributions may be creditable against their U.S. federal income tax on foreign-source income from other sources.

### Capital Gains

A U.S. Holder generally will recognize U.S.-source capital gain or loss for U.S. federal income tax purposes on the sale or exchange of our common shares or ADSs, which will be long-term capital gain or loss if our common shares or ADSs were held by the U.S. Holder for more than one year. The amount of gain or loss will be equal to the difference between the U.S. Holder's tax basis in our common shares or ADSs disposed of and the amount realized on disposition, in each case as determined in U.S. dollars. A U.S. Holder's basis in our common shares or ADSs will generally equal the U.S. Holder's cost of such common shares or ADSs. If a U.S. Holder receives our common shares or ADSs in a non-taxable *pro rata* distribution with respect to its ADSs or common shares (the "new securities"), the basis of such new securities must be determined by allocating the basis of the common shares or ADSs with respect to which the new securities were issued (the "old securities") between the old securities and new securities in proportion to their fair market values on the date of distribution. U.S. Holders should consult their tax advisers about the treatment of capital gains, which may be taxed at lower rates than ordinary income for non-corporate taxpayers, and capital losses, the deductibility of which may be limited.

Table of Contents

Passive Foreign Investment Company Rules

We believe that we were not a passive foreign investment company, or “PFIC”, for U.S. federal income tax purposes for our 2017 taxable year. However, since PFIC status depends upon the composition of a company’s income and assets and the market value of its assets (including, among others, less than 25 percent owned equity investments) from time to time, there can be no assurance that we will not be considered a PFIC for any taxable year.

If we were a PFIC for any taxable year during which a U.S. Holder held a common share or an ADS, certain adverse consequences could apply to that U.S. Holder. If we are a PFIC for any taxable year during which a U.S. Holder owns a common share or an ADS, such U.S. Holder will generally be required to file Internal Revenue Service Form 8621 with their annual U.S. federal income tax returns, subject to certain exceptions.

Information Reporting and Backup Withholding

Payments of dividends and sales proceeds that are made within the United States or through certain U.S.-related financial intermediaries generally are subject to information reporting, and may be subject to backup withholding, unless (i) the U.S. Holder is an exempt recipient or (ii) in the case of backup withholding, the U.S. Holder provides a correct taxpayer identification number and certifies that it is not subject to backup withholding.

The amount of any backup withholding from a payment to a U.S. Holder will be allowed as a credit against the U.S. Holder’s U.S. federal income tax liability and may entitle it to a refund, provided that the required information is timely furnished to the Internal Revenue Service.

DIVIDENDS AND PAYING AGENTS

Not applicable

STATEMENT BY EXPERTS

Not applicable.

#### DOCUMENTS ON DISPLAY

We file annual reports on Form 20-F and periodic reports on Form 6-K with the SEC. You can read and copy these reports and other information at the SEC's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549. You can also request copies of the documents, upon payment of a duplicating fee, by writing to the Public Reference Section of the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room. The reports and other information we file electronically with the SEC are also available to the public from the SEC's website at <http://www.sec.gov>.

#### SUBSIDIARY INFORMATION

Not applicable.

110

Table of Contents

## Item 11. Quantitative and Qualitative Disclosures about Market Risk

## Market Risk

Our exposure to financial market risks relates primarily to changes in interest rates and foreign currency exchange rates.

**Interest Rate Risk.** Our exposure to interest rate risks relates primarily to our long-term floating rate loans, which is normally incurred to support our corporate activities and capital expenditures. See note 34 to our consolidated financial statements included in this annual report for details on interest rate sensitivity analysis.

We entered into several interest rate swap contracts to mitigate interest rate risks in relation to our long-term loans. In April 2013, J&R Holding Limited entered into an interest rate swap contract in the amount of RMB240.0 million, which matured in April 2014, with interest receipt based on a floating rate of 1.05% to 2.80% and payment based on a fixed rate of 2.0%. In February 2014, J&R Holding Limited entered into another interest rate swap contract in the amount of RMB240.0 million, which was scheduled to mature in February 2015 but was settled in May 2014, with interest receipt based on a floating rate of 1.20% to 1.40% and payment based on a fixed rate of 1.35%. We recognized these contracts as hedging derivative liabilities-current with an adjustment to shareholders' equity.

In October 2015, we entered into an interest rate swap contract in the amount of NT\$1,000.0 million, which matured in October 2016, with interest receipt based on a floating rate of 0.00% to 5.00% and payment based on a fixed rate of 4.60%. We recognized it as financial liabilities held for trading with an adjustment to profit or loss.

The tables below set forth information relating to our significant obligations, including short-term borrowings and long-term borrowings, including bank loans, bills payable, capital lease obligations and bonds payable, that are sensitive to interest rate fluctuations as of December 31, 2017.

	Expected Maturity Date					Thereafter	Total	Fair Value
	2018	2019	2020	2021	2022			
	(in millions, except percentages)							
Short-term borrowings:								
Fixed rate (NT\$)	250.0	-	-	-	-	-	250.0	250.0
Average interest rate	0.97%	-	-	-	-	-	0.97%	-
Variable rate (US\$)	(175.4)	-	-	-	-	-	175.4	175.4
Average interest rate	(2.42%)	-	-	-	-	-	2.42%	-



Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

Fixed rate (US\$)	(134.6)	-	-	-	-	-	134.6	134.6
Average interest rate	(1.89%)	-	-	-	-	-	1.89%	-
Variable rate (RMB)	(1,484.9)	-	-	-	-	-	1,484.9	1,484.9
Average interest rate	(4.61%)	-	-	-	-	-	4.61%	-
Fixed rate (RMB)	(87.6)	-	-	-	-	-	87.6	87.6
Average interest rate	(4.57%)	-	-	-	-	-	4.57%	-
Variable rate (HKD)	342.0	-	-	-	-	-	342.0	342.0
Average interest rate	2.36%	-	-	-	-	-	2.36%	-
Fixed rate (EUR)	(0.7)	-	-	-	-	-	0.7	0.7
Average interest rate	(0.80%)	-	-	-	-	-	0.80%	-
Long-term borrowings:								
Variable rate (NT\$)	1,613.5	2,829.7	-	-	-	-	4,443.2	4,443.2
Average interest rate	1.05%	1.09%	-	-	-	-	107%	-
Fixed rate (NT\$)	-	1,500.0	-	7,000.0	3,700.0	6,300.0	18,500.0	18,500.0
Average interest rate	-	1.20%	-	1.30%	1.25%	1.47%	1.34%	-
Variable rate (US\$)	160.0	672.0	-	-	-	-	832.0	832.0
Average interest rate	3.07%	2.56%	-	-	-	-	2.66%	-
Fixed rate (US\$)	0.1	-	-	-	-	-	0.1	0.1
Average interest rate	5.66%	-	-	-	-	-	5.66%	-
Variable rate (RMB)	85.1	180.9	191.6	191.5	191.5	192.5	1,033.1	1,033.1
Average interest rate	5.53%	5.71%	5.95%	6.01%	5.93%	1.71%	5.09%	-

Table of Contents

**Foreign Currency Exchange Rate Risk.** Our foreign currency exposure gives rise to market risk associated with exchange rate movements against the NT dollar, our functional currency. Currently, the majority of our revenues are denominated in U.S. dollars, with a portion denominated in NT dollars and Japanese yen. Our costs of revenues and operating expenses are incurred in several currencies, primarily in NT dollars, U.S. dollars, RMB, Japanese yen, Korean won, as well as, to a lesser extent, Singapore dollars and Malaysian ringgit. In addition, a substantial portion of our capital expenditures, primarily for the purchase of packaging and testing equipment, has been, and is expected to continue to be, denominated primarily in U.S. dollars with the remainder in Japanese yen. The majority of our borrowings are denominated in NT dollars, U.S. dollars and RMB. Fluctuations in exchange rates, primarily among the U.S. dollar against the NT dollar, RMB and the Japanese yen, will affect our costs and operating margins and could result in exchange losses and increased costs in NT dollar and other local currency terms. See note 34 to our consolidated financial statements included in this annual report for details on foreign currency exchange rate sensitivity analysis.

Despite hedging and mitigating techniques implemented by us, fluctuations in exchange rates have affected, and may continue to affect, our financial condition and results of operations. We recorded net foreign exchange losses of NT\$713.2 million in 2015, net foreign exchange gains of NT\$1,928.4 million in 2016 and net foreign exchange gains of NT\$3,502.6 million (US\$118.2 million) in 2017. To protect against reductions in value and the volatility of future cash flows caused by changes in foreign currency exchange rates, we utilize currency forward contracts and swap contracts from time to time to reduce the impact of foreign currency fluctuations on our results of operations. Our policy is to account for these contracts on a mark-to-market rate basis.

Table of Contents

The table below sets forth our outstanding forward exchange contracts and swap contracts, for which the expected maturity dates are in 2018, in aggregate terms by type of contract as of December 31, 2017.

## Forward Exchange Contracts and Swap Contracts

**Forward Exchange Contracts Swap Contracts**

<b>Buy US\$ against NT\$</b>		
Notional Amount	US\$80.0 million	US\$1,782.4 million
Weighted Average Strike Price	US\$/NT\$29.870	US\$/NT\$29.812
Fair Value	Negative US\$0.744 million	Negative US\$21.730 million
<b>Sell US\$ against NT\$</b>		
Notional Amount	US\$1.0 million	US\$217.3 million
Weighted Average Strike Price	US\$/NT\$30.142	US\$/NT\$29.939
Fair Value	US\$0.014 million	US\$1.408 million
<b>Sell US\$ against RMB</b>		
Notional Amount	US\$125.0 million	US\$52.9 million
Weighted Average Strike Price	US\$/RMB6.631	US\$/RMB6.606
Fair Value	US\$1.547 million	US\$0.531 million
<b>Sell US\$ against JP¥</b>		
Notional Amount	US\$45.5 million	US\$70.3 million
Weighted Average Strike Price	US\$/JP¥112.291	US\$/JP¥111.911
Fair Value	Negative US\$0.100 million	Negative US\$0.166 million
<b>Sell US\$ against MYR</b>		
Notional Amount	US\$15.0 million	-
Weighted Average Strike Price	US\$/MYR4.124	-
Fair Value	US\$0.255 million	-
<b>Sell US\$ against SGD</b>		
Notional Amount	US\$11.3 million	-
Weighted Average Strike Price	US\$/SGD1.354	-
Fair Value	US\$0.154 million	-
<b>Sell US\$ against EUR</b>		
Notional Amount	US\$10.7 million	-
Weighted Average Strike Price	US\$/EUR0.843	-
Fair Value	US\$0.089 million	-

**Other Market Risk.** Our exposure to other market risk relates primarily to our investments in publicly-traded stock, unlisted securities, private-placement bonds, open-end mutual funds and limited partnership interests. The value of

these investments may fluctuate based on various factors including prevailing market conditions. Moreover, the fair value of investments in unlisted securities may be significantly different from their carrying value. As of December 31, 2017, our investments in publicly traded stock, open-end mutual funds and private-placement bonds classified as financial assets at fair value through profit or loss were NT\$5,101.2 million (US\$172.1 million). As of December 31, 2017, our investments classified as available-for-sale financial assets were NT\$1,212.2 million (US\$40.9 million), primarily consisting of publicly-traded stock, unlisted securities, open-end mutual funds and limited partnership interests. If the fair values of these investments fluctuate by 1.0%, our profit before income tax will increase or decrease by approximately NT\$52.0 million (US\$1.8 million) for the same period, and our other comprehensive before income tax will increase or decrease by approximately NT\$13.0 million (US\$0.4 million) for the same period. Furthermore, fluctuations in gold prices may also affect the price at which we have been able to purchase gold wire. How this will impact the results of our operations depends on whether such costs can be transferred onto our customers.

Table of Contents

Item 12. Description of Securities Other Than Equity Securities

DEBT SECURITIES

Not applicable.

WARRANTS AND RIGHTS

Not applicable.

OTHER SECURITIES

Not applicable.

AMERICAN DEPOSITARY SHARES

Depository Fees and Charges

Under the terms of the amended and restated deposit agreement dated September 29, 2000 among Citibank, N.A., as depository, holders and beneficial owners of ADSs and us, which was filed as an exhibit to our registration statement on Form F-6 on September 16, 2003, and its two amendments, which were filed as an exhibit to our registration statement on post-effective amendment No. 1 to Form F-6 on April 3, 2006 and our registration statement on post-effective amendment No. 2 to Form F-6 on October 25, 2006, respectively, for our ADSs, an ADS holder may have to pay the following service fees to the depository bank:

**Service**

Issuance of ADSs

Delivery of deposited securities against surrender of ADSs

**Fees**

Up to US\$5.00 per 100 ADSs (or fraction thereof) issued

	Up to US\$5.00 per 100 ADSs (or fraction thereof) surrendered
Distribution of cash dividends or other cash distributions	Up to US\$5.00 per 100 ADSs (or fraction thereof) held, unless prohibited by the exchange upon which the ADSs are listed
Distribution of ADSs pursuant to (i) stock dividends or other free stock distributions, or (ii) exercises of rights to purchase additional ADSs	Up to US\$5.00 per 100 ADSs (or fraction thereof) held, unless prohibited by the exchange upon which the ADSs are listed
Distribution of securities other than ADSs or rights to purchase additional ADSs	Up to US\$5.00 per 100 ADSs (or fraction thereof) held
Depository Services	Up to US\$5.00 per 100 ADSs (or fraction thereof) held, unless prohibited by the exchange upon which the ADSs are listed
Transfer of ADRs	US\$1.50 per certificate presented for transfer

An ADS holder will also be responsible to pay certain fees and expenses incurred by the depository bank and certain taxes and governmental charges such as:

- taxes (including applicable interest and penalties) and other governmental charges;

· such registration fees as may from time to time be in effect for the registration of shares or other deposited securities on the share register and applicable to transfers of shares or other deposited securities to or from the name of the custodian, the depository or any nominees upon the making of deposits and withdrawals, respectively;

Table of Contents

such cable, telex and facsimile transmission and delivery expenses as are expressly provided in the Deposit Agreement to be at the expense of the person depositing or withdrawing shares or holders and beneficial owners of ADSs;

the expenses and charges incurred by the depositary in the conversion of foreign currency;

such fees and expenses as are incurred by the depositary in connection with compliance with exchange control regulations and other regulatory requirements applicable to shares, deposited securities, ADSs and ADRs; and

the fees and expenses incurred by the depositary, the custodian or any nominee in connection with the servicing or delivery of deposited securities.

Depositary fees payable upon the issuance and cancellation of ADSs are typically paid to the depositary bank by the brokers (on behalf of their clients) receiving the newly-issued ADSs from the depositary bank and by the brokers (on behalf of their clients) delivering the ADSs to the depositary bank for cancellation. The brokers in turn charge these transaction fees to their clients.

Depositary fees payable in connection with distributions of cash or securities to ADS holders and the depositary services fee are charged by the depositary bank to the holders of record of ADSs as of the applicable ADS record date. Depositary fees payable for cash distributions are generally deducted from the cash being distributed. In case of distributions other than cash (i.e., stock dividends, rights offerings), the depositary bank charges the applicable fee to the ADS record date holders concurrent with the distribution. In the case of ADSs registered in the name of the investor (whether certificated or un-certificated in direct registration), the depositary bank sends invoices to the applicable record date ADS holders. In case of ADSs held in brokerage and custodian accounts via the central clearing and settlement system, The Depository Trust Company (DTC), the depositary bank generally collects its fees through the systems provided by DTC (whose nominee is the registered holder of the ADSs held in DTC) from the brokers and custodians holding ADSs in their DTC accounts. The brokers and custodians who hold their clients' ADSs in DTC accounts in turn charge their clients' accounts the amount of the fees paid to the depositary banks.

In the event of refusal to pay depositary fees, the depositary bank may, under the terms of the Deposit Agreement, refuse the requested service until payment is received or may set-off the amount of the depositary fees from any distribution to be made to the ADS holder. Note that the fees and charges you may be required to pay may vary over time and may be changed by us and by the depositary bank. You will receive prior notice of such changes.

Depositary Payments

Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

In 2017, we received US\$4,385,151.55 from Citibank, N.A., the depository bank for our ADR programs. The table below sets forth details of the amount we received from Citibank, N.A.

Depository Payments	
Reimbursement of proxy process expenses	US\$ 13,215.84
Reimbursement of ADR holders identification expenses	US\$ 46,780.43
Reimbursement of legal fees	US\$ 62,957.48
Direct reimbursement	US\$ 4,262,197.80
<b>Net payment received by us<sup>(1)</sup></b>	<b>US\$ 4,385,151.55</b>

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



Table of Contents

PART II

Item 13. Defaults, Dividend Arrearages and Delinquencies

Not applicable.

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

Not applicable.

Item 15. Controls and Procedures

Disclosure Controls and Procedures

As of December 31, 2017, our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as defined in Rules 13a-15(e) and 15(d)-15(e) under the Exchange Act. Our management necessarily applied its judgment in assessing the costs and benefits of such controls and procedures, which by their nature can provide only reasonable assurance regarding management's control objectives. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective for recording, processing, summarizing and reporting, within the time periods specified in the SEC's rules and forms, information required to be disclosed in the reports we file or submit under the Exchange Act, and for accumulating and communicating such information to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) and 15d-15(f) promulgated under the Securities Exchange Act of 1934.

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

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2017. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013).

Based on this assessment, management concluded that, as of December 31, 2017, our internal control over financial reporting is effective based on those criteria.

Our independent registered public accounting firm, Deloitte & Touche, independently assessed the effectiveness of our internal control over financial reporting. Deloitte & Touche has issued an attestation report, which is included below.

Report of the Independent Registered Public Accounting Firm

To: the shareholders and Board of Directors of Advanced Semiconductor Engineering, Inc.

***Opinion on Internal Control over Financial Reporting***

We have audited the internal control over financial reporting of Advanced Semiconductor Engineering, Inc. and its subsidiaries (collectively, the “Group”) as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by COSO.

## Table of Contents

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2017 of the Group and our report dated March 23, 2018 expressed an unqualified opinion on those financial statements based on our audit and the report of the other auditors.

### ***Basis for Opinion***

The Group's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Group's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Group in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

### ***Definition and Limitations of Internal Control over Financial Reporting***

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

deteriorate.

/s/ Deloitte & Touche

Taipei, Taiwan

The Republic of China

March 23, 2018

### Changes in Internal Control Over Financial Reporting

There has been no change in our internal control over financial reporting that occurred during the period covered by this annual report that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

117

Table of Contents

Item 16. [Reserved]

Item 16A. Audit Committee Financial Expert

Our board of directors determined that Shen-Fu Yu, Ta-Lin Hsu and Mei-Yueh Ho are audit committee financial experts as defined under the applicable rules of the SEC issued pursuant to Section 407 of the Sarbanes-Oxley Act of 2002 and are independent for the purposes of Rule 10A-3 of the Exchange Act.

Item 16B. Code of Ethics

We have adopted a Code of Business Conduct and Ethics (the “Code of Ethics”) which satisfies the requirements of Item 16B of Form 20-F and applies to all employees, officers, supervisors and directors of our Company and subsidiaries, including our Chief Executive Officer, Chief Financial Officer and principal accounting officer. The Code of Ethics was amended in 2016 to improve the policies with respect to anti-corruption, fair competition, anti-money laundering and whistleblowing policy and regulatory compliance. The Code of Ethics has built robust and effective policies and procedures to enable high ethical standards of business conduct that can be persistently maintained. We have continued to implement the Code of Ethics through promoting awareness and educational activities among our employees, officers, supervisors and directors of our Company and subsidiaries in daily operation. The Code of Ethics is available on our website at <http://www.aseglobal.com>.

Item 16C. Principal Accountant Fees and Services

Policy on Pre-Approval of Audit and Non-Audit Services of Independent Registered Public Accounting Firm

Our audit committee, which was established on July 22, 2005, pre-approves all audit and non-audit services provided by our independent registered public accounting firm, including audit services, audit-related services, tax services and other services, on a case-by-case basis.

Independent Registered Public Accounting Firm’s Fees

The following table sets forth the aggregate fees by categories specified below in connection with certain professional services rendered by Deloitte & Touche. We did not pay any other fees to our independent registered public accounting firm during the periods indicated below.

Table of Contents

	For the Year Ended December 31,			
	2015	2016	2017	US\$
	NT\$	NT\$	NT\$	
Audit fees <sup>(1)</sup>	161,476.9	165,172.5	158,872.5	5,360.1
Audit-related fees <sup>(2)</sup>	4,000.0	7,450.0	1,032.6	34.8
Tax fees <sup>(3)</sup>	13,020.0	15,264.7	16,087.7	542.8
All other fees <sup>(4)</sup>	10,541.6	7,375.0	19,024.7	641.8
Total	189,038.5	195,262.2	195,017.5	6,579.5

Audit fees are defined as the standard audit and review work that needs to be performed each year in order to issue an opinion on our consolidated financial statements and to issue reports on the local statutory financial statements.

(1) It also includes services that can only be provided by our auditor such as statutory audits required by the Tax Bureau of the ROC and the Customs Bureau of the ROC, consents and comfort letters and any other audit services required for SEC or other regulatory filings.

(2) Audit-related fees consist of assurance and related services by Deloitte & Touche that are reasonably related to the performance of the audit or review of our financial statements and are not reported above under Audit Fees. The service for the fees disclosed under this category relate to cash capital increase and bonds offering.

(3) Tax fees consist of professional services rendered by Deloitte & Touche for tax compliance and tax advice. The services for the fees disclosed under this category include tax return preparation and technical tax advice.

(4) Other fees primarily consist of risk management advisory fee and business operation and process advisory fee, among others.

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

Not applicable.

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

## Share Repurchase

On November 29, 2010, we announced a share repurchase program, or Third Share Repurchase, to repurchase up to 37.0 million of our common shares at prices between NT\$25.0 to NT\$41.0 per share during the period from November 30, 2010 to January 28, 2011. This share repurchase program concluded on December 6, 2010, when a total of 37.0 million of our common shares had been repurchased pursuant to this program. As of January 19, 2011, all of these common shares we repurchased had been cancelled. On August 15, 2011, we announced a share repurchase program, or Fourth Share Repurchase, to repurchase up to 34.0 million of our common shares at prices between NT\$20.0 to NT\$45.0 per share during the period from August 16, 2011 to October 15, 2011. This share repurchase program concluded on August 29, 2011, when a total of 34.0 million of our common shares had been repurchased pursuant to this program. On September 1, 2011, we announced a share repurchase program, or Fifth Share Repurchase, to repurchase up to 50.0 million of our common shares at prices between NT\$20.0 to NT\$42.0 per share during the period from September 2, 2011 to November 1, 2011. This share repurchase program concluded on September 16, 2011, when a total of 50.0 million of our common shares had been repurchased pursuant to this program. On September 20, 2011, we announced a share repurchase program, or Sixth Share Repurchase, to repurchase up to 30.0 million of our common shares at prices between NT\$22.0 to NT\$40.0 per share during the period from September 21, 2011 to November 20, 2011. This share repurchase program concluded on November 20, 2011, when a total of 21.475 million of our common shares had been repurchased pursuant to this program. As of January 19, 2012, all of these common shares we repurchased had been cancelled. On February 26, 2015, we announced a share repurchase program, or Seventh Share Repurchase, approved by our board of directors, to repurchase up to 120.0 million of our common shares, which accounts for 1.53% of our total issued shares, at prices between NT\$32.0 to NT\$55.0 per share during the period from March 2, 2015 to April 30, 2015. The program authorized us to repurchase up to NT\$6,600 million worth of our issued common shares in open market transactions. This share repurchase program concluded on March 27, 2015. A total of 120.0 million of our common shares had been repurchased pursuant to this program.



Table of Contents

The table below sets forth certain information about the repurchase of our common shares under these share repurchase programs.

Period	Total Number of Common Shares Purchased	Average Price Paid Per Common Share	Total Number of Common Shares Purchased as Part of Publicly Announced Programs	Maximum Number (or Approximate Dollar Value) of Common Shares that May Yet Be Purchased Under the Programs
<b>Third Share Repurchase</b>				
November 2010 (November 30, 2010)	7,300,000	31.48	7,300,000	29,700,000
December 2010 (December 1, 2010 – December 6, 2010)	29,700,000	32.17	29,700,000	-
Total	37,000,000	32.03	37,000,000	-
<b>Fourth Share Repurchase</b>				
August 2011 (August 16, 2011 – August 29, 2011)	34,000,000	25.72	34,000,000	-
<b>Fifth Share Repurchase</b>				
September 2011 (September 2, 2011 – September 16, 2011)	50,000,000	26.68	50,000,000	-
<b>Sixth Share Repurchase</b>				
September 2011 (September 21, 2011 – September 30, 2011)	6,488,000	27.15	6,488,000	23,512,000
October 2011 (October 1, 2011 – October 31, 2011)	14,316,000	25.85	20,804,000	9,196,000
November 2011 (November 1, 2011 – November 20, 2011)	671,000	26.72	21,475,000	8,525,000
Total	21,475,000	26.27	21,475,000	8,525,000
<b>Seventh Share Repurchase</b>				
March 2015 (March 2, 2015 – March 27, 2015)	120,000,000	44.45	120,000,000	-

## Item 16F. Change In Registrant's Certifying Accountant

Not applicable.

## Item 16G. Corporate Governance

As a company listed on the NYSE, we are subject to certain corporate governance rules of the NYSE. The application of the NYSE's corporate governance rules is limited for foreign private issuers, recognizing that they have to comply with domestic requirements. As a foreign private issuer, we must comply with the following NYSE corporate governance rules: 1) satisfy the audit committee requirements of the SEC; 2) chief executive officer must promptly notify the NYSE in writing upon becoming aware of any material non-compliance with applicable NYSE corporate

governance rules; 3) submit annual and interim affirmations to the NYSE regarding compliance with applicable NYSE corporate governance requirements; and 4) provide a brief description of any significant differences between our corporate governance practices and those required of U.S. companies under the NYSE listing standards. The table below sets forth the significant differences between our corporate governance practices and those required of U.S. companies under the NYSE listing standards.

Table of Contents

**New York Stock Exchange Corporate Governance Rules Applicable to U.S. Companies**

**Description of Significant Differences between Our Governance Practices and the NYSE Corporate Governance Rules Applicable to U.S. Companies**

**Director independence**

Listed companies must have a majority of independent directors, as defined under the NYSE listing standards.

Three members of our board of directors are independent as defined in Rule 10A-3 under the Exchange Act. We do not assess the independence of our directors under the independence requirements of the NYSE listing standards. Pursuant to relevant laws and regulations of the ROC, we have three independent directors on our board of directors that were elected through the candidate nomination system at our annual general meeting on June 23, 2015.

To empower non-management directors to serve as a more effective check on management, the non-management directors of each company must meet at regularly scheduled executive sessions without management.

All of our directors attend the meetings of the board of directors. Our non-management directors do not meet at regularly scheduled executive sessions without management. The ROC Company Law does not require companies incorporated in the ROC to have their non-management directors meet at regularly scheduled executive sessions without management.

**Nominating/Corporate governance committee**

Listed companies must have a nominating/corporate governance committee composed entirely of independent directors and governed by a written charter that provides for certain responsibilities of the committee set out in the NYSE listing standards.

We do not have a nominating/corporate governance committee. The ROC Company Law does not require companies incorporated in the ROC to have a nominating/corporate governance committee. Currently, our board of directors performs the duties of a corporate governance committee and regularly reviews our corporate governance principles and practices.

The ROC Company Law requires that directors be elected by shareholders. Under ROC law and regulations, companies that have independent directors are required to adopt a candidate nomination system for the election of independent directors. Our three independent directors were elected through the candidate nomination system provided in our Articles of Incorporation. All of our non-independent directors were elected directly by our shareholders at our shareholders meetings without a nomination process.

**Compensation committee**

Listed companies must have a compensation committee composed entirely of independent directors and governed by a written charter that provides for certain responsibilities of

We established a compensation committee on September 29, 2011 as required by the regulations promulgated by the FSC in March 2011. The charter of such committee contains similar responsibilities as those provided under NYSE listing standards.

the committee set out in the NYSE listing standards.

In addition to any requirement of Rule 10A-3(b)(1), all compensation committee members must satisfy the independence requirements for independent directors set out in the NYSE listing standards.

121

We do not assess the independence of our compensation committee member under the independence requirements of the NYSE listing standards but adopt the independence standard as promulgated under the ROC Regulations Governing the Appointment and Exercise of Powers by the Remuneration Committee of a Company Whose Stock is Listed on the Stock Exchange or Traded Over the Counter.

## Table of Contents

### **Audit committee**

Listed companies must have an audit committee that satisfies the requirements of Rule 10A-3 under the Exchange Act.

We have an audit committee that satisfies the requirements of Rule 10A-3 under the Exchange Act and the requirements under ROC Securities and Exchange Act.

The audit committee must have a minimum of three members. In addition to any requirement of Rule 10A-3(b)(1), all audit committee members must satisfy the independence requirements for independent directors set out in the NYSE listing standards.

We currently have three members on our audit committee. Our audit committee members satisfy the independence requirements of Rule 10A-3 under the Exchange Act. We do not assess the independence of our audit committee member under the independence requirements of the NYSE listing standards.

The audit committee must have a written charter that provides for the duties and responsibilities set out in Rule 10A-3 and addresses certain other matters required by the NYSE listing standards.

Our audit committee charter provides for the audit committee to assist our board of directors in its oversight of (i) the integrity of our financial statements, (ii) the qualifications, independence and performance of our independent auditor and (iii) our compliance with legal and regulatory requirements and provides for the duties and responsibilities set out in Rule 10A-3. Our audit committee charter does not address all the matters required by the NYSE listing standards beyond the requirements of Rule 10A-3.

Because the appointment and retention of our independent auditor are the responsibility of our entire board of directors under ROC law and regulations, our audit committee charter provides that the audit committee shall make recommendations to the board of directors with respect to these matters.

Each listed company must have an internal audit function.

We have an internal audit function. Under the ROC Regulations for the Establishment of Internal Control Systems by Public Companies, a public company is required to set out its internal control systems in writing, including internal audit implementation rules, which must be approved by the board of directors. Our entire board of directors and the Chief Executive Officer are responsible for the establishment of the internal audit functions, compliance with the internal audit implementation rules and oversight of our internal control systems, including the appointment and retention of our independent auditor.

### **Equity compensation plans**

Shareholders must be given the opportunity to vote on all equity compensation plans and material revisions thereto, except for employment inducement awards, certain grants, plans and amendments in the context of

The board of directors has authority under ROC laws and regulations to approve (i) the distribution of employee compensation and (ii) employee stock option plans by a majority vote of the board of directors at a meeting where at least two-thirds of all directors are present and to grant options to employees pursuant to such plans provided that shareholders' approval is required if the exercise price of an option would be less than the closing price of the common shares on the TWSE on the grant date of the option, subject to the approval of the Securities

mergers and acquisitions, and certain specific types of plans.

and Futures Bureau of the FSC, and to approve treasury stock programs and the transfer of shares to employees under such programs by a majority vote of the board of directors in a meeting where at least two-thirds of all directors are present.

122

## Table of Contents

### **Corporate governance guidelines**

Listed companies must adopt and disclose corporate governance guidelines.

We currently comply with the domestic non-binding Corporate Governance Best-Practice Principles for TWSE and Taipei Exchange Listed Companies promulgated by the TWSE and the Taipei Exchange, and we provide an explanation of the differences between our practice and the principles, if any, in our ROC annual report.

### **Code of ethics for directors, officers and employees**

Listed companies must adopt and disclose a code of business conduct and ethics for directors, officers and employees, and promptly disclose any waivers of the code for directors or executive officers.

We have adopted a code of ethics that satisfies the requirements of Item 16B of Form 20-F and applies to all employees, officers, supervisors and directors of our company and our subsidiaries and will disclose any waivers of the code as required by Item 16B of Form 20-F. We have posted our code of ethics on our website.

### **Description of significant differences**

Listed foreign private issuers must disclose any significant ways in which their corporate governance practices differ from those followed by domestic companies under NYSE listing standards.

This table contains the significant differences between our corporate governance practices and those required of U.S. companies under the NYSE listing standards.

### **CEO certification**

Each listed company CEO must certify to the NYSE each year that he or she is not aware of any violation by the company of NYSE corporate governance listing standards, qualifying the certification to the extent necessary.

As a foreign private issuer, we are not required to comply with this rule; however, our Chief Executive Officer provides certifications under Sections 302 and 906 of the Sarbanes-Oxley Act.

Each listed company CEO must promptly notify the NYSE in writing after any executive officer of the listed company becomes aware of any material non-compliance with any applicable provisions of Section 303A.

We intend to comply with this requirement.

Each listed company must submit an executed Written Affirmation annually to the NYSE. In addition, each listed company must submit an interim Written Affirmation each time a change occurs to the board or any of the committees subject to Section 303A. The annual and interim Written Affirmations must be in the form specified by the NYSE.

We have complied with this requirement to date and intend to continue to comply going forward.

### **Website**

Listed companies must have and maintain a publicly accessible website.

We have and maintain a publicly accessible website.

Item 16H. Mine Safety Disclosure

Not applicable.

123



Table of Contents

PART III

Item 17. Financial Statements

The Company has elected to provide financial statements for fiscal year 2017 and the related information pursuant to Item 18.

Item 18. Financial Statements

Reference is made to pages F-1 to F-99 of this annual report.

The consolidated financial statements of the Company and the report thereon by its independent registered public accounting firm listed below are attached hereto as follows:

- (a) Report of Independent Registered Public Accounting Firm of the Company dated March 23, 2018 (page F-1).
- (b) Report of Independent Registered Public Accounting Firm of SPIL dated March 23, 2018 (page F-2).
- (c) Consolidated Balance Sheets of the Company and subsidiaries as of December 31, 2016 and 2017 (page F-3 to F-4).
- (d) Consolidated Statements of Comprehensive Income of the Company and subsidiaries for the years ended December 31, 2015, 2016 and 2017 (page F-5 to F-6).
- (e) Consolidated Statements of Changes in Equity of the Company and subsidiaries for the years ended December 31, 2015, 2016 and 2017 (page F-7 to F-8).
- (f) Consolidated Statements of Cash Flows of the Company and subsidiaries for the years ended December 31, 2015, 2016 and 2017 (pages F-9 to F-10).
- (g) Notes to Consolidated Financial Statements of the Company and subsidiaries (pages F-11 to F-99).

Item 19. Exhibits

Articles of Incorporation of the Registrant (English translation of Chinese) (incorporated by reference to Exhibit 1 to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2016 filed on April 21, 2017).

2.

(a) Amended and Restated Deposit Agreement dated as of September 29, 2000 among ASE Inc., Citibank N.A., as depositary, and Holders and Beneficial Holders of American Depositary Shares evidenced by American Depositary Receipts issued thereunder, including the form of American Depositary Receipt (incorporated by reference to Exhibit (a) to our registration statement on Form F-6 (File No. 333-108834) filed on September 16, 2003).

(b) Letter Agreement dated as of February 1, 2001 by and between ASE Inc. and Citibank N.A., as depositary for the sole purpose of accommodating the surrender of ASE Inc.'s Rule 144A Global Depositary Shares, the issuance of American Depositary Shares and the delivery of American Depositary Receipts in the context of the termination of ASE Inc.'s Rule 144A Depositary Receipts Facility (incorporated by reference to Exhibit (b)(i) to our registration statement on Post-Effective Amendment No. 1 to Form F-6 (File No. 333-108834) filed on April 3, 2006).

(c) Letter Agreement dated as of September 25, 2003 by and between ASE Inc. and Citibank N.A., as depositary for the sole purpose of accommodating the issuance of American Depositary Shares upon ASE Inc.'s deposit of its shares with the depositary following the conversion of certain bonds issued by ASE Inc. in accordance with, and subject to, the terms and conditions of the indenture governing such bonds (incorporated by reference to Exhibit (b)(ii) to our registration statement on Post-Effective Amendment No. 1 to Form F-6 (File No. 333-108834) filed on April 3, 2006).

Table of Contents

Amendment No. 1 to Amended and Restated Deposit Agreement dated as of April 6, 2006 among ASE Inc., Citibank N.A., as depositary, and Holders and Beneficial Holders of American Depositary Shares evidenced by (d) American Depositary Receipts issued thereunder, including the form of American Depositary Receipt (incorporated by reference to Exhibit (a)(ii) to our registration statement on Post-Effective Amendment No. 2 to Form F-6 (File No. 333-108834) filed on October 25, 2006).

Form of Amendment No. 2 to Amended and Restated Deposit Agreement among ASE Inc., Citibank N.A., as depositary, and Holders and Beneficial Holders of American Depositary Shares evidenced by American Depositary (e) Receipts issued thereunder, including the form of American Depositary Receipt (incorporated by reference to Exhibit (a)(iii) to our registration statement on Post-Effective Amendment No. 2 to Form F-6 (File No. 333-108834) filed on October 25, 2006).

Form of Deposit Agreement among ASE Industrial Holding Co., Ltd., Citibank N.A., as depositary, and Holders and Beneficial Holders of American Depositary Shares evidenced by American Depositary Receipts issued (f) thereunder, including the form of American Depositary Receipt (incorporated by reference to Exhibit (a) to our registration statement on Form F-6 (File No. 333-214753) filed on November 22, 2016).

4.

<sup>^</sup> Asset Purchase Agreement dated as of July 3, 1999 among ASE (Chung Li) Inc., ASE Inc., Motorola Electronics (a) Taiwan, Ltd. and Motorola, Inc. (incorporated by reference to Exhibit 10.2 to ASE Test's registration statement on Form F-3 (File No. 333-10892) filed on September 27, 1999 (the "ASE Test 1999 Form-3")).

Agreement dated as of June 5, 2002 among ASE (Chung Li) Inc., ASE Inc., Motorola Electronics Taiwan, Ltd. and (b) Motorola, Inc. amending certain earn-out arrangements provided for in Section 2.09(b)(ii)(D) of the Asset Purchase Agreement dated as of July 3, 1999 among the same parties (incorporated by reference to Exhibit 4(b) to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2002 filed on June 30, 2003).

<sup>^</sup> Stock Purchase Agreement dated as of July 3, 1999 among ASE Investment (Labuan) Inc., ASE Inc., Motorola (c) Asia Ltd. and Motorola, Inc. relating to the purchase and sale of 100.0% of the common stock of Motorola Korea Ltd. (incorporated by reference to Exhibit 10.3 to the ASE Test 1999 Form F-3).

(d) <sup>†</sup> BGA Immunity Agreement dated as of January 25, 1994 between ASE Inc. and Motorola, Inc. (incorporated by reference to Exhibit 10.6 to the Form F-1).

(e) <sup>†</sup> Amendment dated March 18, 2003 renewing the BGA Immunity Agreement dated as of January 25, 1994 between ASE Inc. and Motorola, Inc. (incorporated by reference to Exhibit 4(g) to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2003 filed on June 30, 2004).

Consent dated June 10, 2004 to the Assignment of the BGA Immunity Agreement between ASE Inc. and Motorola, Inc. dated January 25, 1994 (incorporated by reference to Exhibit 4(h) to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2003 filed on June 30, 2004).

Asset Purchase Agreement by and among Flextronics Manufacturing (M) Sdn Bhd. as Buyer, ASE Electronics (M) Sdn. Bhd. as Company, dated as of October 3, 2005 (incorporated by reference to Exhibit 4(g) to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2005 filed on June 19, 2006).

Joint Venture Agreement dated as of July 14, 2006 among Advanced Semiconductor Engineering, Inc. and Powerchip Semiconductor Corp. relating to the establishment of, and our investment of 60.0% in, PowerASE (incorporated by reference to Exhibit 4(r) to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2006 filed on June 25, 2007, as amended).

Table of Contents

- Sale and Purchase Agreement dated January 11, 2007 among J&R Holding Limited and Seacoast Profits Limited  
(i) relating to our acquisition of 100% of GAPT (incorporated by reference to Exhibit 4(s) to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2006 filed on June 25, 2007, as amended).
- Equity Interests Transfer Agreement dated August 6, 2007 by and among NXP B.V., NXP Semiconductors Suzhou Ltd. and J&R Holding Limited relating to our acquisition of 60% of ASEN, our joint venture with NXP Semiconductors (incorporated by reference to Exhibit 4(j) to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2008 filed on June 24, 2009).  
(j)
- Scheme Implementation Agreement dated September 4, 2007 between Advanced Semiconductor Engineering, Inc. and ASE Test Limited relating to our acquisition of all the outstanding ordinary shares of, and the privatization of, ASE Test (incorporated by reference to Appendix A to Exhibit (a)(1) to Schedule 13E-3 (File No. 005-55723) filed by ASE Test on January 4, 2008).  
(k)
- Syndicated Loan Agreement in the amount of NT\$24,750 million dated March 3, 2008 among Advanced Semiconductor Engineering, Inc., Citibank, N.A., Taipei Branch and the banks and banking institutions listed on Schedule I thereto relating to our acquisition of all the outstanding ordinary shares of, and the privatization of, ASE Test (incorporated by reference to Exhibit 4(l) to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2008 filed on June 24, 2009).
- Equity Purchase Agreement dated March 17, 2008 between Aimhigh Global Corp., TCC Steel and J&R Holding Limited in respect of Weihai Aimhigh Electronic Co. Ltd. relating to our acquisition of 100% of ASE (Weihai), Inc. (incorporated by reference to Exhibit 4(m) to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2008 filed on June 24, 2009).  
(m)
- Syndicated Loan Agreement in the amount of US\$200 million dated May 29, 2008 among Advanced Semiconductor Engineering, Inc., Citibank, N.A., Taipei Branch and the banks and banking institutions listed on Schedule I thereto relating to our acquisition of all the outstanding ordinary shares of, and the privatization of, ASE Test (incorporated by reference to Exhibit 4(n) to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2008 filed on June 24, 2009).  
(n)
- Equity Purchase Agreement dated October 25, 2011 between PowerASE Technology, Inc. and certain shareholders of Lu-Chu Development Corporation relating to our acquisition of 72.97% of all the outstanding ordinary shares of Lu-Chu Development Corporation (incorporated by reference to Exhibit 4(o) to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2011 filed on April 20, 2012).  
(o)
- Equity Purchase Agreement dated October 25, 2011 between PowerASE Technology, Inc. and shareholders of Lu-Chu Development Corporation listed on Schedule I thereto relating to our acquisition of 9.3% of all the outstanding ordinary shares of Lu-Chu Development Corporation (incorporated by reference to Exhibit 4(p) to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2011 filed on April 20, 2012).  
(p)

(q) Equity Purchase Agreement dated November 17, 2011 between ASE Assembly & Test (Shanghai) Limited and Kunshan Ding Yao Real Estate Development Co., Ltd. relating to our acquisition of 10% equity of Shanghai Ding Hui Real Estate Development Co., Ltd. (incorporated by reference to Exhibit 4(q) to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2011 filed on April 20, 2012).

Table of Contents

(r) Equity Purchase Agreement dated January 13, 2012 between Advanced Semiconductor Engineering, Inc. and shareholders of Yang Ting Tech Co., Ltd. listed on Schedule I thereto relating to our acquisition of 61.63% of all the outstanding ordinary shares of Yang Ting Tech Co., Ltd. (incorporated by reference to Exhibit 4(r) to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2011 filed on April 20, 2012).

(s) Equity Purchase Agreement dated January 13, 2012 between Advanced Semiconductor Engineering, Inc. and shareholders of Yang Ting Tech Co., Ltd. listed on Schedule I thereto relating to our acquisition of 38.37% of all the outstanding ordinary shares of Yang Ting Tech Co., Ltd. (incorporated by reference to Exhibit 4(s) to our annual report on Form 20-F (File No. 001-16125) for the year ended December 31, 2011 filed on April 20, 2012).

(t) Joint Share Exchange Agreement dated June 30, 2016 between Advanced Semiconductor Engineering, Inc. and Siliconware Precision Industries Co., Ltd. relating to our proposed acquisition of 100% of the common shares and American depositary shares of Siliconware Precision Industries Co., Ltd. (incorporated by reference to Annex A to our registration statement on Form F-4 (File No. 333-214752) filed on November 22, 2016).

8.

\*List of Subsidiaries

12.

(a) \*Certification of Jason C.S. Chang, required by Rule 13a-14(a) of the Exchange Act.

(b) \*Certification of Joseph Tung, required by Rule 13a-14(a) of the Exchange Act.

\*Certification of the Chief Executive Officer and the Chief Financial Officer of Advanced Semiconductor Engineering, Inc. required by Rule 13a-14(b) of the Exchange Act and Section 1350 of Chapter 63 of Title 18 of the United States Code.

15.

(a)

\*Consent of Deloitte & Touche.

(b)

\*Consent of PricewaterhouseCoopers.

---

† Does not contain portions for which confidential treatment has been granted.

^ Filed in paper.

\* Filed herewith.

The Company agrees to furnish to the SEC upon request a copy of any instrument which defines the rights of holders of long-term debt of the Company and its consolidated subsidiaries.

127



Table of Contents

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

ADVANCED SEMICONDUCTOR  
ENGINEERING, INC.

By: /s/ Joseph Tung

Name: Joseph Tung

Title: Chief Financial Officer

Date: March 28, 2018

Table of Contents

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

	Page
<b>Consolidated Financial Statements of Advanced Semiconductor Engineering, Inc. and Subsidiaries</b>	
Independent Registered Public Accounting Firm's Report of Deloitte & Touche	F-1
Independent Registered Public Accounting Firm's Report of PricewaterhouseCoopers	F-2
Consolidated Balance Sheets	F-3
Consolidated Statements of Comprehensive Income	F-5
Consolidated Statements of Changes in Equity	F-7
Consolidated Statements of Cash Flows	F-9
Notes to Consolidated Financial Statements	F-11

Table of Contents

**Advanced Semiconductor Engineering,**

**Inc. and Subsidiaries**

**Consolidated Financial Statements as of December 31, 2016 and 2017 and for the Years Ended December 31, 2015, 2016 and 2017 and**

**Reports of Independent Registered Public Accounting Firms**

Table of Contents

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the shareholders and the Board of Directors of

Advanced Semiconductor Engineering, Inc.

**Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheets of Advanced Semiconductor Engineering, Inc. (a corporation incorporated under the laws of the Republic of China) and its subsidiaries (collectively, the “Group”) as of December 31, 2016 and 2017, the related consolidated statements of comprehensive income, changes in equity and cash flows for each of the three years in the period ended December 31, 2017, and the related notes (collectively referred to as the “financial statements”) (all expressed in New Taiwan dollars). In our opinion, based on our audits and the report of the other auditors, the financial statements present fairly, in all material respects, the financial position of the Group as of December 31, 2016 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We did not audit the 2016 and 2017 consolidated financial statements of Siliconware Precision Industries Co., Ltd. (“SPIL”), the Group’s investment in which is accounted for by use of the equity method. The accompanying consolidated financial statements of the Group include its equity investment in SPIL of NT\$45,898,225 thousand and NT\$45,210,371 thousand (US\$1,525,316 thousand), constituting 13% and 12% of the Group’s total assets as of December 31, 2016 and 2017, respectively, and its share of profit in SPIL of NT\$1,725,053 thousand and NT\$915,253 thousand (US\$30,879 thousand), constituting 8% and 4% of the Group’s net profit for the years ended December 31, 2016 and 2017, respectively. The consolidated financial statements of SPIL as of and for the years ended December 31, 2016 and 2017 were audited by the other auditors whose report has been furnished to us, and our opinion, insofar as it relates to the amounts included for the Group’s equity investment and share of profit in SPIL, is based solely on the report of the other auditors.

Our audits also comprehended the translation of New Taiwan dollar amounts into U.S. dollar amounts and, in our opinion, such translation has been made in conformity with the basis stated in Note 4 to the consolidated financial statements. Such U.S. dollar amounts are presented solely for the convenience of the readers outside the Republic of China.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Group's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 23, 2018 expressed an unqualified opinion on the Group's internal control over financial reporting based on our audit.

### **Basis for Opinion**

These financial statements are the responsibility of the Group's management. Our responsibility is to express an opinion on the Group's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Group in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits and the report of the other auditors provide a reasonable basis for our opinion.

/s/Deloitte & Touche

Taipei, Taiwan

Republic of China

March 23, 2018

We have served as the Group's auditor since 1984.

F-1

Table of Contents

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of

Siliconware Precision Industries Co., Ltd.

*Opinion on the Financial Statements*

We have audited the accompanying consolidated balance sheets of Siliconware Precision Industries Co., Ltd. and its subsidiaries as of December 31, 2017 and 2016, and the related consolidated statements of comprehensive income, of changes in equity and of cash flows for each of the three years in the period ended December 31, 2017, including the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements (not presented herein) present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2017 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

*Basis for Opinion*

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by

management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers, Taiwan

Taipei, Taiwan

March 22, 2018

We have served as the Company's auditor since 1994

F-2

Table of Contents**ADVANCED SEMICONDUCTOR ENGINEERING, INC. AND SUBSIDIARIES****CONSOLIDATED BALANCE SHEETS****(Amounts in Thousands)**

	December 31, 2016 (Retrospectively Adjusted)	December 31, 2017	
ASSETS	NT\$	NT\$	US\$ (Note 4)
<b>CURRENT ASSETS</b>			
Cash and cash equivalents (Notes 4 and 6)	\$ 38,392,524	\$46,078,066	\$1,554,591
Financial assets at fair value through profit or loss - current (Notes 4 and 7)	3,069,812	5,223,067	176,217
Available-for-sale financial assets - current (Notes 4 and 8)	266,696	89,159	3,008
Trade receivables, net (Notes 4 and 9)	51,145,557	55,200,706	1,862,372
Other receivables	665,480	1,051,955	35,491
Current tax assets (Notes 4 and 25)	471,752	260,542	8,790
Inventories (Notes 4 and 10)	21,438,062	24,260,911	818,519
Inventories related to real estate business (Notes 4, 11, 24 and 36)	24,187,515	9,819,516	331,293
Other financial assets - current (Notes 4, 12 and 36)	558,686	472,340	15,936
Other current assets	2,593,575	2,482,010	83,738
Total current assets	142,789,659	144,938,272	4,889,955
<b>NON-CURRENT ASSETS</b>			
Available-for-sale financial assets - non-current (Notes 4 and 8)	1,028,338	1,123,006	37,888
Investments accounted for using the equity method (Notes 4 and 13)	49,824,690	48,753,751	1,644,863
Property, plant and equipment (Notes 4, 14, 24 and 37)	143,880,241	135,168,406	4,560,338
Investment properties (Notes 4, 15, 24 and 36)	-	8,119,436	273,935
Goodwill (Notes 4, 5, 16 and 28)	10,490,309	9,934,494	335,172
Other intangible assets (Notes 4, 17, 24, 28 and 35)	1,617,261	1,406,865	47,465
Deferred tax assets (Notes 4 and 25)	4,536,924	4,001,821	135,014
Other financial assets - non-current (Notes 4, 12 and 36)	1,320,381	1,170,500	39,491
Long-term prepayments for lease (Notes 18 and 36)	2,237,033	8,851,330	298,628



Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

Other non-current assets	205,740	454,391	15,330
Total non-current assets	215,140,917	218,984,000	7,388,124
TOTAL	\$ 357,930,576	\$363,922,272	\$12,278,079

(Continued)

F-3

Table of Contents**ADVANCED SEMICONDUCTOR ENGINEERING, INC. AND SUBSIDIARIES****CONSOLIDATED BALANCE SHEETS****(Amounts in Thousands)**

LIABILITIES AND EQUITY	December 31,		
	December 31, 2016 (Retrospectively Adjusted) NT\$	December 31, 2017 NT\$	US\$ (Note 4)
<b>CURRENT LIABILITIES</b>			
Short-term borrowings (Note 19)	\$ 20,955,522	\$ 17,962,471	\$ 606,021
Financial liabilities at fair value through profit or loss - current (Notes 4 and 7)	1,763,660	677,430	22,855
Trade payables	35,803,984	41,672,233	1,405,946
Other payables (Note 21)	21,522,034	21,377,887	721,251
Current tax liabilities (Notes 4 and 25)	6,846,350	7,619,328	257,062
Current portion of bonds payable (Notes 4 and 20)	9,658,346	6,161,197	207,868
Current portion of long-term borrowings (Notes 19 and 36)	6,567,565	8,261,625	278,732
Other current liabilities	3,852,113	4,644,566	156,699
Total current liabilities	106,969,574	108,376,737	3,656,434
<b>NON-CURRENT LIABILITIES</b>			
Bonds payable (Notes 4 and 20)	27,341,557	16,981,583	572,928
Long-term borrowings (Notes 19 and 36)	46,547,998	27,145,003	915,823
Deferred tax liabilities (Notes 4 and 25)	4,856,549	4,961,487	167,392
Net defined benefit liabilities (Notes 4 and 22)	4,172,253	3,936,685	132,817
Other non-current liabilities	1,201,480	1,210,590	40,843
Total non-current liabilities	84,119,837	54,235,348	1,829,803
Total liabilities	191,089,411	162,612,085	5,486,237
<b>EQUITY ATTRIBUTABLE TO OWNERS OF THE COMPANY (Notes 4 and 23)</b>			
Share capital			
Ordinary shares (Note 31)	79,364,735	87,246,194	2,943,529
Shares subscribed in advance	203,305	134,593	4,541
Total share capital	79,568,040	87,380,787	2,948,070
Capital surplus (Note 31)	22,266,500	40,624,328	1,370,591
Retained earnings (Notes 13 and 28)			

Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

Legal reserve	14,597,032	16,765,066	565,623
Special reserve	3,353,938	3,353,938	113,156
Unappropriated earnings	44,188,554	53,599,541	1,808,352
Total retained earnings	62,139,524	73,718,545	2,487,131
Other equity	(1,840,937 )	(6,311,089 )	(212,925 )
Treasury shares	(7,292,513 )	(7,292,513 )	(246,036 )
Equity attributable to owners of the Company	154,840,614	188,120,058	6,346,831
NON-CONTROLLING INTERESTS (Notes 4 and 23)	12,000,551	13,190,129	445,011
Total equity	166,841,165	201,310,187	6,791,842
TOTAL	\$ 357,930,576	\$ 363,922,272	\$ 12,278,079

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

Table of Contents**ADVANCED SEMICONDUCTOR ENGINEERING, INC. AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME****(Amounts in Thousands Except Earnings Per Share)**

	For the Years Ended December 31			
	2015	2016 (Retrospectively Adjusted)	2017	US\$ (Note 4)
	NT\$	NT\$	NT\$	
OPERATING REVENUES (Note 4)	\$ 283,302,536	\$ 274,884,107	\$ 290,441,208	\$ 9,798,961
OPERATING COSTS (Notes 10, 24 and 28)	233,167,308	221,696,922	237,708,937	8,019,870
GROSS PROFIT	50,135,228	53,187,185	52,732,271	1,779,091
OPERATING EXPENSES (Notes 24 and 28)				
Selling and marketing expenses	3,588,472	3,473,586	3,308,992	111,639
General and administrative expenses	10,724,568	11,662,082	12,458,054	420,312
Research and development expenses	10,937,566	11,391,147	11,746,613	396,309
Total operating expenses	25,250,606	26,526,815	27,513,659	928,260
OTHER OPERATING INCOME AND EXPENSES, NET (Note 24)	(251,529 )	(800,280 )	108,556	3,662
PROFIT FROM OPERATIONS	24,633,093	25,860,090	25,327,168	854,493
NON-OPERATING INCOME AND EXPENSES				
Other income (Note 24)	815,778	589,236	707,754	23,878
Other gains and losses (Note 24)	1,748,795	2,276,544	6,259,453	211,183
Finance costs (Note 24)	(2,312,143 )	(2,261,075 )	(1,799,494 )	(60,712 )
Share of the profit of associates and joint ventures (Notes 4 and 13)	126,265	1,503,910	525,782	17,739
Total non-operating income and expenses	378,695	2,108,615	5,693,495	192,088

Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

PROFIT BEFORE INCOME TAX	25,011,788	27,968,705	31,020,663	1,046,581
INCOME TAX EXPENSE (Notes 4 and 25)	4,311,073	5,390,844	6,523,603	220,094
PROFIT FOR THE YEAR	20,700,715	22,577,861	24,497,060	826,487
OTHER COMPREHENSIVE INCOME (LOSS)				
Items that will not be reclassified subsequently to profit or loss:				
Remeasurement of defined benefit obligation	(62,911 )	(417,181 )	205,344	6,928

(Continued)

F-5

Table of Contents**ADVANCED SEMICONDUCTOR ENGINEERING, INC. AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME****(Amounts in Thousands Except Earnings Per Share)**

	For the Years Ended December 31			
	2015	2016 (Retrospectively Adjusted)	2017	US\$ (Note 4)
	NT\$	NT\$	NT\$	
Share of other comprehensive income (loss) of associates and joint ventures	\$ (37,748 )	\$ (49,794 )	\$ 7,249	\$ 245
Income tax relating to items that will not be reclassified subsequently	11,002 (89,657 )	73,637 (393,338 )	(51,217 ) 161,376	(1,728 ) 5,445
Items that may be reclassified subsequently to profit or loss:				
Exchange differences on translating foreign operations	(63,509 )	(6,445,643 )	(5,287,734 )	(178,399)
Unrealized gain (loss) on available- for-sale financial assets	10,451	(248,599 )	224,036	7,559
Share of other comprehensive income (loss) of associates and joint ventures	(4,832 ) (57,890 )	(871,679 ) (7,565,921 )	264,389 (4,799,309 )	8,920 (161,920)
Other comprehensive loss for the year, net of income tax	(147,547 )	(7,959,259 )	(4,637,933 )	(156,475)
<b>TOTAL COMPREHENSIVE INCOME FOR THE YEAR</b>	<b>\$ 20,553,168</b>	<b>\$ 14,618,602</b>	<b>\$ 19,859,127</b>	<b>\$ 670,012</b>
<b>PROFIT FOR THE YEAR ATTRIBUTABLE TO:</b>				
Owners of the Company	\$ 19,732,148	\$ 21,324,423	\$ 22,819,119	\$ 769,876
Non-controlling interests	968,567	1,253,438	1,677,941	56,611
	\$ 20,700,715	\$ 22,577,861	\$ 24,497,060	\$ 826,487
<b>TOTAL COMPREHENSIVE INCOME FOR THE YEAR ATTRIBUTABLE TO:</b>				
Owners of the Company	\$ 19,659,081	\$ 13,956,976	\$ 18,524,067	\$ 624,969

Non-controlling interests	894,087	661,626	1,335,060	45,043
	\$20,553,168	\$ 14,618,602	\$ 19,859,127	\$ 670,012
EARNINGS PER SHARE (Note 26)				
Basic	\$2.58	\$ 2.78	\$2.80	\$0.09
Diluted	\$2.48	\$ 2.33	\$2.60	\$0.09
EARNINGS PER AMERICAN DEPOSITARY SHARE (“ADS”)				
Basic	\$12.89	\$ 13.91	\$ 13.98	\$0.47
Diluted	\$12.38	\$ 11.64	\$ 12.98	\$0.44

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

Table of Contents**ADVANCED SEMICONDUCTOR ENGINEERING, INC. AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY****(Amounts in Thousands)**

Equity Attributable to Owners of the Company								Other E
Share Capital		Retained Earnings						Exchang
Shares	Amounts	Capital	Legal	Special	Unappropriated	Total	Differen	
(In		Surplus	Reserve	Reserve	Earnings		on	
Thousands)							Translat	
							Foreign	
							Operati	
BALANCE AT								
JANUARY 1, 2015	7,861,725	\$78,715,179	\$16,013,980	\$10,289,878	\$3,353,938	\$36,000,026	\$49,643,842	\$4,540,
Equity component of convertible bonds issued by the Company (Note 20)	-	-	214,022	-	-	-	-	-
Appropriation of 2014 earnings								
Legal reserve	-	-	-	2,359,267	-	(2,359,267 )	-	-
Cash dividends distributed by the Company	-	-	-	-	-	(15,589,825)	(15,589,825)	-
	-	-	-	2,359,267	-	(17,949,092)	(15,589,825)	-
	-	-	150	-	-	-	-	-



Change from investments in associates and joint ventures accounted for using the equity method

Net profit for the year ended December 31, 2015

-	-	-	-	-	19,732,148	19,732,148	-
---	---	---	---	---	------------	------------	---

Other comprehensive income (loss) for the year ended December 31, 2015, net of income tax

-	-	-	-	-	(86,217 )	(86,217 )	(48,19
---	---	---	---	---	-----------	-----------	--------

Total comprehensive income (loss) for the year ended December 31, 2015

-	-	-	-	-	19,645,931	19,645,931	(48,19
---	---	---	---	---	------------	------------	--------

Acquisition of treasury shares

-	-	-	-	-	-	-	-
---	---	---	---	---	---	---	---

Issue of dividends received by subsidiaries from the Company

-	-	292,351	-	-	-	-	-
---	---	---------	---	---	---	---	---

Partial disposal of interests in subsidiaries and additional acquisition of majority-owned subsidiaries (Note 30)

-	-	7,197,510	-	-	-	-	-
---	---	-----------	---	---	---	---	---

-	-	(563,815 )	-	-	-	-	-
---	---	------------	---	---	---	---	---

Changes in  
percentage of  
ownership  
interest in  
subsidiaries

Issue of  
ordinary shares  
under employee  
share options  
(Note 27)

48,703	470,481	604,352	-	-	-	-	-
--------	---------	---------	---	---	---	---	---

Cash dividends  
distributed by  
subsidiaries

-	-	-	-	-	-	-	-
---	---	---	---	---	---	---	---

Additional  
non-controlling  
interest arising  
on issue of  
employee share  
options by  
subsidiaries  
(Note 27)

-	-	-	-	-	-	-	-
---	---	---	---	---	---	---	---

BALANCE AT  
DECEMBER  
31, 2015

7,910,428	79,185,660	23,758,550	12,649,145	3,353,938	37,696,865	53,699,948	4,492,000
-----------	------------	------------	------------	-----------	------------	------------	-----------

Appropriation  
of 2015  
earnings

Legal reserve  
Cash dividends  
distributed by  
the Company

-	-	-	1,947,887	-	(1,947,887)	-	-
---	---	---	-----------	---	-------------	---	---

-	-	-	-	-	(12,476,779)	(12,476,779)	-
---	---	---	---	---	--------------	--------------	---

-	-	-	1,947,887	-	(14,424,666)	(12,476,779)	-
---	---	---	-----------	---	--------------	--------------	---

Change from  
investments in  
associates and  
joint ventures  
accounted for  
using the equity  
method

-	-	51,959	-	-	-	-	-
---	---	--------	---	---	---	---	---

Net profit for  
the year ended  
December  
31, 2016

(After retrospectively adjusted) (Notes 13 and 28)	-	-	-	-	-	21,324,423	21,324,423	-
Other comprehensive loss for the year ended December 31, 2016, net of income tax	-	-	-	-	-	(402,184 )	(402,184 )	(6,136 )
Total comprehensive income (loss) for the year ended December 31, 2016 (After retrospectively adjusted)	-	-	-	-	-	20,922,239	20,922,239	(6,136 )

(Continued)

Table of Contents**ADVANCED SEMICONDUCTOR ENGINEERING, INC. AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY****(Amounts in Thousands)**

	Equity Attributable to Owners of the Company							Other E Exchan Differen on Transla Foreign Operati
	Share Capital		Retained Earnings				Unappropriated Total	
	Shares (In Thousands)	Amounts	Capital Surplus	Legal Reserve	Special Reserve	Earnings		
Issue of dividends received by subsidiaries from the Company	-	\$-	\$233,013	\$-	\$-	\$-	\$-	\$-
Partial disposal of interests in subsidiaries and additional acquisition of majority-owned subsidiaries (Note 30)	-	-	(20,552 )	-	-	(5,884 )	(5,884 )	-
Changes in percentage of ownership interest in subsidiaries (Note 30)	-	-	(1,912,887 )	-	-	-	-	-
Issue of ordinary shares	35,756	382,380	600,737	-	-	-	-	-

under employee  
share options  
(Note 27)

Non-controlling  
interests arising  
from acquisition  
of subsidiaries  
(After  
retrospectively  
adjusted) (Note  
28)

Cash dividends  
distributed by  
subsidiaries

Additional  
non-controlling  
interest arising  
on issue of  
employee share  
options by  
subsidiaries  
(Note 27)

BALANCE AT  
DECEMBER  
31, 2016  
(After  
retrospectively  
adjusted) (Notes  
13 and 28)

Appropriation  
of 2016 earnings  
Legal reserve  
Cash dividends  
distributed by  
the Company

Change from  
investments in  
associates and  
joint ventures  
accounted for  
using the equity  
method

-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	(444,320 )	-	-	-	-	-	-
7,946,184	79,568,040	22,266,500	14,597,032	3,353,938	44,188,554	62,139,524	(1,643,000)	
-	-	-	2,168,034	-	(2,168,034 )	-	-	-
-	-	-	-	-	(11,415,198)	(11,415,198)	-	-
-	-	-	2,168,034	-	(13,583,232)	(11,415,198)	-	-
-	-	1,490	-	-	-	-	-	-

Net profit for the year ended December 31, 2017	-	-	-	-	-	22,819,119	22,819,119	-
Other comprehensive income (loss) for the year ended December 31, 2017, net of income tax	-	-	-	-	-	175,100	175,100	(5,090)
Total comprehensive income (loss) for the year ended December 31, 2017	-	-	-	-	-	22,994,219	22,994,219	(5,090)
Issue of ordinary shares for capital increase by cash (Note 23)	300,000	3,000,000	7,290,000	-	-	-	-	-
Issue of ordinary shares under conversion of bonds (Notes 20 and 23)	424,258	4,242,577	9,657,905	-	-	-	-	-
Issue of dividends received by subsidiaries from the Company	-	-	200,977	-	-	-	-	-
Changes in percentage of ownership interest in subsidiaries (Note 30)	-	-	3,055	-	-	-	-	-

Issue of ordinary shares under employee share options (Note 27)	67,637	570,170	1,256,789	-	-	-	-	-
Cash dividends distributed by subsidiaries	-	-	-	-	-	-	-	-
Additional non-controlling interest arising on issue of employee share options by subsidiaries (Note 27)	-	-	(52,388 )	-	-	-	-	-
BALANCE AT DECEMBER 31, 2017	8,738,079	\$87,380,787	\$40,624,328	\$16,765,066	\$3,353,938	\$53,599,541	\$73,718,545	\$(6,733,111)
US DOLLARS (Note 4)								
BALANCE AT DECEMBER 31, 2017	8,738,079	\$2,948,070	\$1,370,591	\$565,623	\$113,156	\$1,808,352	\$2,487,131	\$(227,111)

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

Table of Contents**ADVANCED SEMICONDUCTOR ENGINEERING, INC. AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF CASH FLOWS****(Amounts in Thousands)**

	For the Years Ended December 31			
	2015	2016	2017	US\$ (Note 4)
	NT\$	(Retrospectively Adjusted) NT\$	NT\$	
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>				
Profit before income tax	\$25,011,788	\$ 27,968,705	\$31,020,663	\$1,046,581
Adjustments for:				
Depreciation expense	28,938,770	28,961,614	28,747,518	969,890
Amortization expense	579,894	508,823	457,666	15,441
Net loss (gain) on fair value change of financial assets and liabilities at fair value through profit or loss	(2,472,835 )	(447,559 )	2,783,902	93,924
Finance costs	2,312,143	2,261,075	1,799,494	60,712
Interest income	(242,084 )	(230,067 )	(306,871 )	(10,353 )
Dividend income	(396,973 )	(26,411 )	(59,039 )	(1,992 )
Compensation cost of employee share options	133,496	470,788	438,765	14,803
Share of profit of associates and joint ventures	(126,265 )	(1,503,910 )	(525,782 )	(17,739 )
Loss (gain) on disposal of property, plant and equipment	126,132	131,044	(348,070 )	(11,743 )
Impairment loss recognized on financial assets	8,232	91,886	77,101	2,601
Reversal of impairment loss on financial assets	-	(28,022 )	-	-
Impairment loss recognized on non-financial assets	610,140	1,340,011	1,113,499	37,568
Gain on disposal of subsidiaries	-	-	(5,589,457 )	(188,578 )
Net loss (gain) on foreign currency exchange	1,358,777	(407,160 )	(2,356,480 )	(79,503 )
Others	1,242,110	900,378	1,172,005	39,541
Changes in operating assets and liabilities				
Financial assets held for trading	4,162,522	1,052,111	(226,049 )	(7,626 )



Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

Trade receivables	7,982,736	(6,184,873 )	(4,066,374 )	(137,192 )
Other receivables	55,112	(211,755 )	(330,491 )	(11,150 )
Inventories	(5,128,726 )	3,156,759	(2,907,848 )	(98,106 )
Other current assets	407,017	(24,517 )	(781,477 )	(26,366 )
Financial liabilities held for trading	(1,725,606 )	(2,952,116 )	(3,874,662 )	(130,724 )
Trade payables	(1,272,717 )	1,665,420	4,753,270	160,367
Other payables	(814,809 )	1,380,205	685,398	23,124
Other current liabilities	2,545,312	(2,347,599 )	211,145	7,124
Other operating activities items	(247,024 )	(407,143 )	27,538	929
Cash generated from operations	63,047,142	55,117,687	51,915,364	1,751,533
Interest received	253,289	228,509	236,746	7,987
Dividend received	499,918	4,043,644	1,929,218	65,088
Interest paid	(2,067,955 )	(2,043,870 )	(1,666,759 )	(56,234 )
Income tax paid	(4,184,089 )	(5,238,103 )	(4,983,769 )	(168,144 )
Net cash generated from operating activities	57,548,305	52,107,867	47,430,800	1,600,230

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

Table of Contents**ADVANCED SEMICONDUCTOR ENGINEERING, INC. AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF CASH FLOWS****(Amounts in Thousands)**

	For the Years Ended December 31			
	2015	2016	2017	
		(Retrospectively Adjusted)		
	NT\$	NT\$	NT\$	US\$ (Note 4)
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>				
Purchase of financial assets designated as at fair value through profit or loss	\$(100,842,813)	\$(64,853,336 )	\$(61,308,095)	\$(2,068,424)
Proceeds on sale of financial assets designated as at fair value through profit or loss	102,139,161	66,472,870	61,601,865	2,078,335
Purchase of available-for-sale financial assets	(1,273,510 )	(1,590,928 )	(902,648 )	(30,454 )
Proceeds on sale of available-for-sale financial assets	2,761,145	867,336	1,121,517	37,838
Cash received from return of capital by available-for-sale financial assets	44,511	28,927	16,175	546
Acquisition of associates and joint ventures	(35,673,097 )	(16,041,463 )	-	-
Net cash outflow on acquisition of subsidiaries	-	(73,437 )	-	-
Net cash inflow from disposal of subsidiaries	-	-	7,020,883	236,872
Payments for property, plant and equipment	(30,280,124 )	(26,714,163 )	(24,699,240)	(833,308 )
Proceeds from disposal of property, plant and equipment	243,031	670,200	1,488,210	50,210
Payments for intangible assets	(491,135 )	(513,893 )	(337,984 )	(11,403 )
Proceeds from disposal of intangible assets	-	25,646	34,690	1,170
Payments for investment properties	-	-	(186,522 )	(6,293 )
Decrease (increase) in other financial assets	358,266	(1,231,186 )	236,227	7,970
Increase in other non-current assets	(336,864 )	(206,031 )	(171,320 )	(5,780 )
Net cash used in investing activities	(63,351,429 )	(43,159,458 )	(16,086,242)	(542,721 )
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>				
Net repayment of short-term borrowings	(8,532,792 )	(10,640,229 )	(2,038,993 )	(68,792 )

Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

Net proceeds from (repayment of)				
short-term bills payable	4,348,054	(4,348,054 )	-	-
Proceeds from issue of bonds	6,136,425	9,000,000	8,000,000	269,906
Repayment of bonds payable	-	(10,365,135 )	(9,123,972 )	(307,826 )
Proceeds from long-term borrowings	39,887,570	62,282,917	35,394,158	1,194,135
Repayment of long-term borrowings	(22,926,660 )	(52,924,902 )	(51,867,539)	(1,749,917)
Dividends paid	(15,297,474 )	(12,243,766 )	(11,214,221)	(378,348 )
Proceeds from issue of ordinary shares	-	-	10,290,000	347,166
Proceeds from exercise of employee				
share options	1,285,102	995,832	1,439,819	48,577
Payments for acquisition of treasury shares	(5,333,406 )	-	-	-
Proceeds from partial disposal of interests in				
subsidiaries	8,910,346	-	-	-
Decrease in non-controlling interests	(232,148 )	(3,063,623 )	(246,440 )	(8,314 )
Other financing activities items	391,322	219,940	43,761	1,476
Net cash generated from (used in) financing	8,636,339	(21,087,020 )	(19,323,427)	(651,937 )
activities				
EFFECTS OF EXCHANGE RATE				
CHANGES ON THE BALANCE OF				
CASH AND CASH EQUIVALENTS				
HELD IN FOREIGN CURRENCY	\$723,556	\$(4,720,046 )	\$(4,335,589 )	\$(146,275 )
NET INCREASE (DECREASE) IN CASH AND CASH	3,556,771	(16,858,657)	7,685,542	259,297
EQUIVALENTS				
CASH AND CASH EQUIVALENTS AT THE	51,694,410	55,251,181	38,392,524	1,295,294
BEGINNING OF THE YEAR				
CASH AND CASH EQUIVALENTS AT THE END OF	\$55,251,181	\$38,392,524	\$46,078,066	\$1,554,591
THE YEAR				

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

Table of Contents

**ADVANCED SEMICONDUCTOR ENGINEERING, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(Amounts in Thousands, Unless Stated Otherwise)**

1. GENERAL INFORMATION

Advanced Semiconductor Engineering, Inc. (the “Company”), a corporation incorporated under the laws of Republic of China (the “ROC”), and its subsidiaries (collectively referred to as the “Group”) offer a comprehensive range of semiconductors packaging, testing, and electronic manufacturing services (“EMS”).

The Company’s ordinary shares are listed on the Taiwan Stock Exchange (the “TSE”) under the symbol “2311”. Since September 2000, the ordinary shares of the Company have been traded on the New York Stock Exchange (the “NYSE”) under the symbol “ASX” in the form of American Depositary Shares (“ADS”). The ordinary shares of its subsidiary, Universal Scientific Industrial (Shanghai) Co., Ltd (the “USISH”), are listed on the Shanghai Stock Exchange (the “SSE”) under the symbol “601231”.

The consolidated financial statements are presented in the Company’s functional currency, New Taiwan dollar (NT\$).

2. APPROVAL OF FINANCIAL STATEMENTS

The consolidated financial statements were authorized for issue by the management on March 23, 2018.

**3. APPLICATION OF NEW AND REVISED INTERNATIONAL FINANCIAL REPORTING STANDARDS AS ISSUED BY THE INTERNATIONAL ACCOUNTING STANDARDS BOARD (“IASB”) ( collectively, “IFRSs”)**

- a. Amendments to IFRSs that are mandatorily effective for the current year

In the current year, the Group has applied the following new, revised or amended standards and interpretations that have been issued and effective:

<b>New, Revised or Amended Standards and Interpretations</b>	<b>Effective Date Issued by IASB</b>
Amendments to IFRSs Annual Improvements to IFRSs: 2014-2016 Cycle	Note 2
Amendments to IAS 7 Disclosure Initiative	January 1, 2017
Amendments to IAS 12 Recognition of Deferred Tax Assets for Unrealized Losses	January 1, 2017

(Note 1)

Note 1: The aforementioned new, revised or amended standards and interpretations are effective for annual period beginning on or after the effective dates, unless specified otherwise.

Note 2: The amendment to IFRS 12 is retrospectively applied for annual periods beginning on or after January 1, 2017; the amendment to IAS 28 is retrospectively applied for annual periods beginning on or after January 1, 2018.

Table of Contents

Except the adoption of Amendments to IAS 7 which can be referred to Note 34e, the Group believes that the adoption of the aforementioned new, revised or amended standards and interpretations did not have a material effect on the Group's accounting policies.

- b. New, revised or amended standards and interpretations in issue but not yet effective

The Group has not applied the following new, revised or amended standards and interpretations that have been issued but are not yet effective:

<b>New, Revised or Amended Standards and Interpretations</b>		<b>Effective Date Issued by IASB (Note 1)</b>
Amendments to IFRSs	Annual Improvements to IFRSs 2015-2017 Cycle	January 1, 2019
Amendments to IFRS 2	Classification and Measurement of Share-based Payment Transactions	January 1, 2018
IFRS 9	Financial Instruments	January 1, 2018
Amendments to IFRS 9 and IFRS 7	Mandatory Effective Date of IFRS 9 and Transition Disclosures	January 1, 2018
Amendments to IFRS 9	Prepayment Features with Negative Compensation	January 1, 2019
Amendments to IFRS 10 and IAS 28	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture	To be determined by IASB
IFRS 15	Revenue from Contracts with Customers	January 1, 2018
Amendments to IFRS 15	Clarifications to IFRS15 Revenue from Contracts with Customers	January 1, 2018
IFRS 16	Leases	January 1, 2019
Amendments to IAS 19	Plan Amendment, Curtailment or Settlement	January 1, 2019 (Note 2)
Amendments to IAS 40	Transfers of investment property	January 1, 2018
IFRIC 22	Foreign Currency Transactions and Advance Consideration	January 1, 2018
Amendments to IAS 28	Long-term Interests in Associate and Joint Venture	January 1, 2019
IFRIC 23	Uncertainty over Income Tax Treatments	January 1, 2019

Note 1 : The aforementioned new, revised or amended standards and interpretations are effective for annual period beginning on or after the effective dates, unless specified otherwise.

Note 2 : The Group shall apply these amendments to plan amendments, curtailments or settlements occurring on or after January 1, 2019.

- c. Significant changes in accounting policy resulted from new, revised and amended standards and interpretations in issue but not yet effective

Except for the following, the Group believes that the adoption of the aforementioned new, revised or amended standards and interpretations will not have a material effect on the Group's accounting policies. As of the date that the accompanying consolidated financial statements were authorized for issue, the Group continues in evaluating the impact on its financial position and financial performance as a result of the initial adoption of the below standards and interpretations. The related impact will be disclosed when the Group completes the evaluation.

F-12

Table of Contents

- 1) IFRS 9 “Financial Instruments” and related amendments

Classification, measurement and impairment of financial assets

With regards to financial assets, all recognized financial assets that are within the scope of IAS 39 “Financial Instruments: Recognition and Measurement” are subsequently measured at amortized cost or fair value. Under IFRS 9, the requirement for the classification of financial assets is stated below:

For the Group’s debt instruments that have contractual cash flows that are solely payments of principal and interest on the principal amount outstanding, their classification and measurement are as follows:

For debt instruments, if they are held within a business model whose objective is to collect the contractual cash flows, the financial assets are measured at amortized cost and are assessed for impairment continuously with any impairment loss recognized in profit or loss. Interest revenue is recognized in profit or loss by using the effective interest method;

For debt instruments, if they are held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets, the financial assets are measured at fair value through other comprehensive income (FVTOCI) and are assessed for impairment. Interest revenue is recognized in profit or loss by using the effective interest method, and other gains or losses shall be recognized in other comprehensive income, except for impairment gains or losses and foreign exchange gains and losses. When the debt instruments are derecognized or reclassified, the cumulative gain or loss previously recognized in other comprehensive income is reclassified from equity to profit or loss.

Except for above, all other financial assets are measured at fair value through profit or loss. However, the Group may make an irrevocable election to present subsequent changes in the fair value of an equity investment (that is not held for trading) in other comprehensive income, with only dividend income generally recognized in profit or loss. No subsequent impairment assessment is required, and the cumulative gain or loss previously recognized in other comprehensive income cannot be reclassified from equity to profit or loss.

The Group analyzed the facts and circumstances of its financial assets that exist at December 31, 2017 and performed the assessment of the impact of IFRS 9 on the classification and measurement of financial assets. Under IFRS 9:

a) Unquoted shares and limited partnership classified as available-for-sale will be designated as at fair value through other comprehensive income and the fair value gains or losses accumulated in other equity will be transferred directly to retained earnings instead of being reclassified to profit or loss on disposal. Impairment losses previously



recognized and accumulated in retained earnings will be adjusted by the Group to record an increase in retained earnings and a decrease in other equity, unrealized gains or losses on financial assets at fair value through other comprehensive income, since no subsequent impairment assessment is required under IFRS 9;

Quoted shares classified as available-for-sale will be classified as at fair value through profit or loss under IFRS 9.

Open-end mutual funds classified as available-for-sale will be classified as at fair value through profit or loss under b) IFRS 9 because the contractual cash flows are not solely payments of principal and interest on the principal outstanding and they are not equity instruments. The Group will reclassify unrealized gains or losses on available-for-sale financial assets in other equity to retained earnings;

Time deposits with original maturity of over three months, pledged time deposits and guarantee deposits will be c) classified as measured at amortized cost under IFRS 9 because, on initial recognition, the contractual cash flows that are solely payments of principal and interest on the

Table of Contents

principal outstanding and these investments are held within a business model whose objective is to collect the contractual cash flows; and

d) Debt investments with no active market will be classified as at fair value through other comprehensive income under IFRS 9, because, on initial recognition, the contractual cash flows that are solely payments of principal and interest on the principal outstanding and these investments are held within a business model whose objective is achieved both by collecting contractual cash flows and selling financial assets. The Group will adjust those debt investments and other equity, unrealized gains or losses on financial assets at fair value through other comprehensive income, based on their fair value;

IFRS 9 requires that impairment loss on financial assets to be recognized by using the “Expected Credit Losses Model”. A loss allowance is required for financial assets measured at amortized cost, investments in debt instruments measured at FVTOCI, lease receivables, contract assets arising from IFRS 15 “Revenue from Contracts with Customers”, certain written loan commitments and financial guarantee contracts. A loss allowance for the 12-month expected credit losses is required for a financial asset if its credit risk has not increased significantly since initial recognition. A loss allowance for full-lifetime expected credit losses is required for a financial asset if its credit risk has increased significantly since initial recognition and is not low. However, a loss allowance for full-lifetime expected credit losses is required for trade receivables that do not constitute a financing transaction.

For purchased or originated credit-impaired financial assets, the Group takes into account the expected credit losses on initial recognition in calculating the credit-adjusted effective interest rate. Subsequently, any changes in expected losses are recognized as a loss allowance with a corresponding gain or loss recognized in profit or loss.

In general, the Group anticipates that the application of the expected credit losses model of IFRS 9 will result in an earlier recognition of credit losses for financial assets.

The Group elects not to restate prior reporting periods when applying the requirements for the classification, measurement and impairment of financial assets under IFRS 9 with the cumulative effect of the initial application recognized at the date of initial application and will provide the disclosures related to the classification and the adjustment information upon initial application of IFRS 9.

The anticipated impact on assets, liabilities and equity of retrospective application of the requirements for the classification, measurement and impairment of financial assets on January 1, 2018 is set out below:

Carrying Amount as of	Adjustments Arising	Adjusted Carrying
--------------------------	------------------------	----------------------

	December 31, 2017	<b>from Initial Application</b>	<b>Amount as of January 1, 2018</b>
	NT\$	NT\$	NT\$
<u>Impact on assets, liabilities and equity</u>			
Financial assets at fair value through profit or loss - current	\$5,223,067	\$ 89,159	\$5,312,226
Available-for-sale financial assets - current	89,159	(89,159 )	-
Investments accounted for using the equity method	48,753,751	(2,586 )	48,751,165

(Continued)

F-14

Table of Contents

	Carrying Amount as of December 31, 2017	Adjustments Arising from Initial Application	Adjusted Carrying Amount as of January 1, 2018
	NT\$	NT\$	NT\$
Financial assets at fair value through profit or loss - non-current	\$-	\$214,457	\$214,457
Financial assets at fair value through other comprehensive income - non-current	-	1,988,549	1,988,549
Available-for-sale financial assets - non-current	1,123,006	(1,123,006)	-
Other financial assets non-current	1,170,500	(1,000,000)	170,500
Total effect on assets	\$56,359,483	\$77,414	\$56,436,897
Retained earnings	\$73,718,545	\$364,467	\$74,083,012
Unrealized gain on equity investments at fair value through other comprehensive income	-	55,517	55,517
Unrealized gain on available-for-sale financial assets	422,570	(422,570)	-
Unrealized gain on debt investments at fair value through other comprehensive income	-	80,000	80,000
Total effect on equity	\$74,141,115	\$77,414	\$74,218,529

(Concluded)

	Carrying Amount as of December 31, 2017	Adjustments Arising from Initial Application	Adjusted Carrying Amount as of January 1, 2018
	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)
<u>Impact on assets, liabilities and equity</u>			
Financial assets at fair value through profit or loss - current	\$176,217	\$3,008	\$179,225
Available-for-sale financial assets - current	3,008	(3,008)	-
Investments accounted for using the equity method	1,644,863	(87)	1,644,776
Financial assets at fair value through profit or loss - non-current	-	7,235	7,235
Financial assets at fair value through other comprehensive income - non-current	-	67,090	67,090
Available-for-sale financial assets - non-current	37,888	(37,888)	-
Other financial assets non-current	39,491	(33,738)	5,753

Total effect on assets	\$1,901,467	\$ 2,612	\$1,904,079
------------------------	-------------	----------	-------------

(Continued)

F-15

Table of Contents

	Carrying Amount as of December 31, 2017	Adjustments Arising from Initial Application	Adjusted Carrying Amount as of January 1, 2018
	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)
Retained earnings	\$2,487,131	\$ 12,297	\$2,499,428
Unrealized gain on equity investments at fair value through other comprehensive income	-	1,873	1,873
Unrealized gain on available-for-sale financial assets	14,257	(14,257 )	-
Unrealized gain on debt investments at fair value through other comprehensive income	-	2,699	2,699
Total effect on equity	\$2,501,388	\$ 2,612	\$2,504,000

(Concluded)

Hedge accounting

The main changes in hedge accounting amended the application requirements for hedge accounting to better reflect the entity's risk management activities. Compared with IAS 39, the main changes include: (1) enhancing types of transactions eligible for hedge accounting, specifically broadening the risk eligible for hedge accounting of non-financial items; (2) changing the way hedging cost of derivative instruments are accounted for to reduce profit or loss volatility; and (3) replacing retrospective effectiveness assessment with the principle of economic relationship between the hedging instrument and the hedged item.

The assessment of the Group's current hedging relationships indicates that they will qualify as continuing hedging relationships upon application of IFRS 9.

## 2) IFRS 15 "Revenue from Contracts with Customers" and related amendments

IFRS 15 establishes principles for recognizing revenue that apply to all contracts with customers, and will supersede IAS 18 "Revenue", IAS 11 "Construction Contracts" and a number of revenue-related interpretations.

When applying IFRS 15, the Group recognizes revenue by applying the following steps:

- Identify the contract with the customer;
- Identify the performance obligations in the contract;
- Determine the transaction price;
- Allocate the transaction price to the performance obligations in the contracts; and
- Recognize revenue when the Group satisfies a performance obligation.

The Group packages bare semiconductors into finished semiconductors and provides testing services according to customers' agreed specifications. The Group's aforementioned performances enhance semiconductors that customers control as semiconductors are enhanced; therefore the revenue generated from packaging and testing service will be recognized over time after the application of IFRS 15. Before the application of IFRS 15, the Group recognizes revenue when

Table of Contents

the significant risks and rewards of ownership of inventories have been transferred to customers.

The Group elects to retrospectively apply IFRS 15 to contracts that are not complete on January 1, 2018 and recognize the cumulative effect of retrospectively applying IFRS 15 in the retained earnings on January 1, 2018. In addition, the Group will disclose the difference between the amount that results from applying IFRS 15 and the amount that results from applying current standards for 2018.

The anticipated impact on assets, liabilities and equity when retrospectively applying IFRS 15 on January 1, 2018 is detailed below:

	Carrying Amount as of December 31, 2017  NT\$	Adjustments Arising  from Initial Application  NT\$	Adjusted Carrying  Amount as of January 1, 2018  NT\$
Inventories	\$24,260,911	\$(1,381,778)	\$22,879,133
Contract assets - current	-	1,971,107	1,971,107
Investments accounted for using the equity method	48,753,751	40,139	48,793,890
Deferred tax assets	4,001,821	(7,287 )	3,994,534
<b>Total effect on assets</b>	<b>\$77,016,483</b>	<b>\$622,181</b>	<b>\$77,638,664</b>
Current tax liabilities	\$7,619,328	\$5,078	\$7,624,406
Deferred tax liabilities	4,961,487	90,071	5,051,558
<b>Total effect on liabilities</b>	<b>\$12,580,815</b>	<b>\$95,149</b>	<b>\$12,675,964</b>
Retained earnings	\$73,718,545	\$521,849	\$74,240,394
Non-controlling interests	13,190,129	5,183	13,195,312
<b>Total effect on equity</b>	<b>\$86,908,674</b>	<b>\$527,032</b>	<b>\$87,435,706</b>

Carrying Amount as of December 31, 2017 US\$ (Note 4)	Adjustments Arising  from Initial Application  US\$ (Note 4)	Adjusted Carrying  Amount as of January 1, 2018 US\$ (Note 4)
---	--	--



Inventories	\$818,519	\$ (46,619 )	\$771,900
Contract assets - current	-	66,502	66,502
Investments accounted for using the equity method	1,644,863	1,354	1,646,217
Deferred tax assets	135,014	(246 )	134,768
 Total effect on assets	 \$2,598,396	 \$ 20,991	 \$2,619,387
 Current tax liabilities	 \$257,062	 \$ 171	 \$257,233
Deferred tax liabilities	167,392	3,039	170,431
 Total effect on liabilities	 \$424,454	 \$ 3,210	 \$427,664
(Continued)			

F-17

Table of Contents

	Carrying Amount as of December 31, 2017 US\$ (Note 4)	<b>Adjustments Arising from Initial Application</b> US\$ (Note 4)	Adjusted Carrying Amount as of January 1, 2018 US\$ (Note 4)
Retained earnings	\$2,487,131	\$ 17,606	\$2,504,737
Non-controlling interests	445,011	175	445,186
Total effect on equity	\$2,932,142	\$ 17,781	\$2,949,923

(Concluded)

3)

IFRS 16 “Leases”

IFRS 16 sets out the accounting standards for leases that will supersede IAS 17 and a number of related interpretations.

Under IFRS 16, if the Group is a lessee, it shall recognize right-of-use assets and lease liabilities for all leases on the consolidated balance sheets except for low-value and short-term leases. The Group may elect to apply the accounting method similar to the accounting for operating lease under IAS 17 to low-value and short-term leases. On the consolidated statements of comprehensive income, the Group should present the depreciation expense charged on the right-of-use asset separately from the interest expense accrued on the lease liabilities; interest is computed by using effective interest method. On the consolidated statements of cash flows, cash payments for the principal portion of the lease liabilities are classified within financing activities; cash payments for the interest portion are classified within operating activities.

The application of IFRS 16 is not expected to have a material impact on the accounting of the Group as lessor.

When IFRS 16 becomes effective, the Group may elect to apply this Standard either retrospectively to each prior reporting period presented or retrospectively with the cumulative effect of the initial application of this Standard recognized at the date of initial application.

4)

Amendments to IAS 19 “Plan Amendment, Curtailment or Settlement ”

The amendments stipulate that, if a plan amendment, curtailment or settlement occurs, the current service cost and the net interest for the remainder of the annual reporting period are determined using the actuarial assumptions used for the remeasurement of the net defined benefit liabilities (assets). In addition, the amendments clarify the effect of a plan amendment, curtailment or settlement on the requirements regarding the asset ceiling. The amendment shall be applied prospectively.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a. Statement of Compliance

The consolidated financial statements have been prepared in accordance with IFRSs as issued by the IASB.

b. Basis of Preparation

The consolidated financial statements have been prepared on the historical cost basis except for certain financial instruments that are measured at fair value and net defined benefit liabilities which are

Table of Contents

measured at the present value of the defined benefit obligation less the fair value of plan assets.

The fair value measurements are grouped into Levels 1 to 3 based on the degree to which the fair value measurement inputs are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- 1) Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities;
- 2) Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for an asset or a liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- 3) Level 3 inputs are unobservable inputs for an asset or a liability.

c. Classification of Current and Non-current Assets and Liabilities

Current assets include cash and cash equivalents and those assets held primarily for trading purposes or expected to be realized within twelve months after the balance sheet date, unless the asset is to be used for an exchange or to settle a liability, or otherwise remains restricted, at more than twelve months after the balance sheet date. Current liabilities are obligations incurred for trading purposes or to be settled within twelve months after the balance sheet date and liabilities that do not have an unconditional right to defer settlement for at least twelve months after the balance sheet date. Assets and liabilities that are not classified as current are classified as non-current.

The Group engages in the construction business which has an operating cycle of over one year. The normal operating cycle applies when considering the classification of the Group's construction-related assets and liabilities.

d. Basis of Consolidation

- 1) Principles for preparing consolidated financial statements

The consolidated financial statements incorporate the financial statements of the Company and the entities controlled by the Company (i.e. its subsidiaries, including structured entities).

Income and expenses of subsidiaries acquired or disposed of during the period are included in the consolidated statement of profit or loss and other comprehensive income from the effective dates of acquisitions up to the effective dates of disposals, as appropriate.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with those used by the Company.

All intra-group transactions, balances, income and expenses are eliminated in full upon consolidation. Total comprehensive income of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Changes in the Group's ownership interests in subsidiaries that do not result in the Group losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the interests of the Group and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity and attributed to the owners of the Company.

When the Group loses control over a subsidiary, a gain or loss is recognized in profit or loss and is calculated as the difference between (i) the aggregate of the fair value of the consideration received and any investment retained in the former subsidiary at its fair value at the date when control is lost and (ii) the assets (including any goodwill) and liabilities and any non-controlling interests of the former subsidiary at their carrying amounts at the date when control is lost. The Group accounts for all amounts recognized in other comprehensive income in relation to that subsidiary on the same basis as would be required if the Group had directly disposed of the related assets or liabilities.

Table of Contents

2) Subsidiaries included in consolidated financial statements were as follows:

Name of Investee	Main Businesses	Establishment and Operating Location	Percentage of Ownership (%)	
			December 31 2016	2017
A.S.E. Holding Limited	Holding company	Bermuda	100.0	100.0
J & R Holding Limited (“J&R Holding”)	Holding company	Bermuda	100.0	100.0
Innosource Limited	Holding company	British Virgin Islands	100.0	100.0
Omniquest Industrial Limited	Holding company	British Virgin Islands	100.0	100.0
ASE Marketing & Service Japan Co., Ltd.	Engaged in marketing and sales services	Japan	100.0	100.0
ASE Test, Inc.	Engaged in the testing of semiconductors	Kaohsiung, ROC	100.0	100.0
USI Inc. (“USIINC”)	Engaged in investing activity	Nantou, ROC	99.2	99.2
Luchu Development Corporation (“Luchu”)	Engaged in the development of real estate properties	Taipei, ROC	86.1	86.1
TLJ Intertech Inc. (“TLJ”)	Engaged in information software services	Taipei, ROC	60.0	60.0
Alto Enterprises Limited	Holding company	British Virgin Islands	100.0	100.0
Super Zone Holdings Limited	Holding company	Hong Kong	100.0	100.0
ASE (Kun Shan) Inc.	Engaged in the packaging and testing of semiconductors	Kun Shan, China	100.0	100.0
ASE Investment (Kun Shan) Limited	Holding company	Kun Shan, China	100.0	100.0
Advanced Semiconductor Engineering (China) Ltd.	Will engage in the packaging and testing of semiconductors	Shanghai, China	100.0	100.0
ASE Investment (Labuan) Inc.	Holding company	Malaysia	100.0	100.0
ASE Test Limited (“ASE Test”)	Holding company	Singapore	100.0	100.0
ASE (Korea) Inc. (“ASE Korea”)	Engaged in the packaging and testing of semiconductors	Korea	100.0	100.0
J&R Industrial Inc.	Engaged in leasing equipment and investing activity	Kaohsiung, ROC	100.0	100.0
ASE Japan Co., Ltd. (“ASE Japan”)	Engaged in the packaging and testing of semiconductors	Japan	100.0	100.0
ASE (U.S.) Inc.	After-sales service and sales support	U.S.A.	100.0	100.0
Global Advanced Packaging Technology Limited	Holding company	British Cayman Islands	100.0	100.0

(Continued)

F-20

Table of Contents

Name of Investee	Main Businesses	Establishment and Operating Location	Percentage of Ownership (%)	
			December 31 2016	December 31 2017
ASE WeiHai Inc.	Engaged in the packaging and testing of semiconductors	Shandong, China	100.0	100.0
Suzhou ASEN Semiconductors Co., Ltd. (“ASEN”)	Engaged in the packaging and testing of semiconductors	Suzhou, China	60.0	60.0
Anstock Limited	Engaged in financing activity	British Cayman Islands	100.0	100.0
Anstock II Limited	Engaged in financing activity	British Cayman Islands	100.0	100.0
ASE Module (Shanghai) Inc.	Absorbed by ASE (Shanghai) Inc. in February 2017	Shanghai, China	100.0	-
ASE (Shanghai) Inc.	Engaged in the production of substrates	Shanghai, China	100.0	100.0
ASE Corporation	Holding company	British Cayman Islands	100.0	100.0
ASE Mauritius Inc.	Holding company	Mauritius	100.0	100.0
ASE Labuan Inc.	Holding company	Malaysia	100.0	100.0
Shanghai Ding Hui Real Estate Development Co., Ltd.	Engaged in the development, construction and sale of real estate properties	Shanghai, China	100.0	100.0
Shanghai Ding Qi Property Management Co., Ltd.	Engaged in the management of real estate properties	Shanghai, China	100.0	100.0
Advanced Semiconductor Engineering (HK) Limited	Engaged in the trading of substrates	Hong Kong	100.0	100.0
Shanghai Ding Wei Real Estate Development Co., Ltd.	Engaged in the development, construction and leasing of real estate properties	Shanghai, China	100.0	100.0
Shanghai Ding Yu Real Estate Development Co., Ltd.	Engaged in the development, construction and leasing of real estate properties	Shanghai, China	100.0	100.0
Shanghai Ding Fan Department Store Co., Ltd.	Engaged in department store business	Shanghai, China	100.0	100.0
Kun Shan Ding Yue Real Estate Development Co., Ltd. (“KSDY”)	Engaged in the development, construction and leasing of real estate properties and was disposed of in June 2017 (Note 29)	Kun Shan, China	100.0	-
Kun Shan Ding Hong Real Estate Development Co., Ltd.	Engaged in the development, construction and leasing of real estate properties	Kun Shan, China	100.0	100.0
Shanghai Ding Xu Property Management Co., Ltd.	Engaged in the management of real estate properties, and was established in August 2017	Shanghai, China	-	100.0



(Continued)

F-21

Table of Contents

Name of Investee	Main Businesses	Establishment and Operating Location	Percentage of Ownership	
			December 31, 2016	December 31, 2017
ASE Electronics Inc.	Engaged in the production of substrates	Kaohsiung, ROC	100.0	100.0
ASE Test Holdings, Ltd.	Holding company	British Cayman Islands	100.0	100.0
ASE Holdings (Singapore) Pte. Ltd.	Holding company	Singapore	100.0	100.0
ASE Singapore Pte. Ltd.	Engaged in the packaging and testing of semiconductors	Singapore	100.0	100.0
ISE Labs, Inc.	Engaged in the testing of semiconductors	U.S.A.	100.0	100.0
ASE Electronics (M) Sdn. Bhd.	Engaged in the packaging and testing of semiconductors	Malaysia	100.0	100.0
ASE Assembly & Test (Shanghai) Limited	Engaged in the packaging and testing of semiconductors	Shanghai, China	100.0	100.0
ASE Trading (Shanghai) Ltd.	Engaged in trading activity	Shanghai, China	100.0	100.0
Wuxi Tongzhi Microelectronics Co., Ltd.	Engaged in the packaging and testing of semiconductors	Wuxi, China	100.0	100.0
Huntington Holdings International Co., Ltd.	Holding company	British Virgin Islands	99.2	99.2
Unitech Holdings International Co., Ltd.	Holding company	British Virgin Islands	99.2	99.2
Real Tech Holdings Limited	Holding company	British Virgin Islands	99.2	99.2
Universal ABIT Holding Co., Ltd.	In the process of liquidation	British Cayman Islands	99.2	99.2
Rising Capital Investment Limited	Holding company	British Virgin Islands	99.2	99.2
Rise Accord Limited	Holding company	British Virgin Islands	99.2	99.2
Universal Scientific Industrial (Kunshan) Co., Ltd.	Engaged in the manufacturing and sale of computer assistance system and related peripherals	Kun Shan, China	99.2	99.2
USI Enterprise Limited (“USIE”)	Engaged in the services of investment advisory and warehousing management	Hong Kong	97.0	96.9
USISH	Engaged in the designing, manufacturing and sale of electronic components	Shanghai, China	75.9	75.8
Universal Global Technology Co., Limited	Holding company	Hong Kong	75.9	75.8
		Kun Shan, China	75.9	75.8

Universal Global Technology (Kunshan) Co., Ltd.	Engaged in the designing and manufacturing of electronic components
--	--

(Continued)

F-22

Table of Contents

Name of Investee	Main Businesses	Establishment and Operating Location	Percentage of Ownership	
			December 31 2016	2017
Universal Global Technology (Shanghai) Co., Ltd.	Engaged in the processing and sales of computer and communication peripherals as well as business in import and export of goods and technology	Shanghai, China	75.9	75.8
Universal Global Electronics (Shanghai) Co., Ltd.	Engaged in the sale of electronic components and telecommunications equipment	Shanghai, China	75.9	75.8
Universal Global Industrial Co., Limited	Engaged in manufacturing, trading and investing activity	Hong Kong	75.9	75.8
Universal Global Scientific Industrial Co., Ltd. (“UGTW”)	Engaged in the manufacturing of components of telecomm and cars and provision of related R&D services	Nantou, ROC	75.9	75.8
USI America Inc.	Engaged in the manufacturing and processing of motherboards and wireless network communication and provision of related technical service.	U.S.A.	75.9	75.8
Universal Scientific Industrial De Mexico S.A. De C.V.	Engaged in the assembling of motherboards and computer components	Mexico	75.9	75.8
USI Japan Co., Ltd.	Engaged in the manufacturing and sale of computer peripherals, integrated chip and other related accessories	Japan	75.9	75.8
USI Electronics (Shenzhen) Co., Ltd.	Engaged in the design, manufacturing and sale of motherboards and computer peripherals	Shenzhen, China	75.9	75.8
Universal Scientific Industrial Co., Ltd. (“USI”)	Engaged in the manufacturing, processing and sale of computers, computer peripherals and related accessories	Nantou, ROC	75.2	75.5

(Concluded)

e.

## Business Combinations

Acquisitions of businesses are accounted for using the acquisition method. Acquisition-related costs are generally recognized in profit or loss as they are incurred.

Goodwill is measured as the excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. If, after re-assessment, the net of the acquisition-date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree and the fair value of the acquirer's previously held interest in the acquiree (if any), the excess is recognized immediately in profit or loss as a bargain purchase gain.

When a business combination is achieved in stages, the Group's previously held equity interest in the acquiree is remeasured to its acquisition-date fair value and the resulting gain or loss, if any, is recognized in profit or loss. Amounts arising from interests in the acquiree prior to the acquisition date that have previously been recognized in other comprehensive income are recognized on the same basis as would be required if that interest were directly disposed of by the Group.

Table of Contents

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted retrospectively during the measurement period, or additional assets or liabilities are recognized, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognized at that date.

Business combination involving entities under common control is not accounted for by acquisition method but accounted for at the carrying amounts of the entities. Prior period comparative information in the financial statements is restated as if a business combination involving entities under common control had already occurred in that period.

f. Foreign Currencies

In preparing the financial statements of each individual group entity, transactions in currencies other than the entity's functional currency (i.e. foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions.

At each balance sheet date, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Exchange differences on monetary items arising from settlement or translation are recognized in profit or loss in the period in which they arise.

Non-monetary items measured at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Exchange differences arising from the retranslation of non-monetary items are included in profit or loss for the period except for exchange differences arising from the retranslation of non-monetary items in respect of which gains and losses are recognized directly in other comprehensive income, in which cases, the exchange differences are also recognized directly in other comprehensive income.

Non-monetary items that are measured at historical cost in a foreign currency are translated using the exchange rate at the date of the transaction, and are not retranslated.

For the purposes of presenting the consolidated financial statements, the assets and liabilities of the Group's foreign operations are translated into New Taiwan dollars using exchange rates prevailing at each balance sheet date. Income and expense items are translated at the average exchange rates for the period. The resulting currency translation differences are recognized in other comprehensive income and accumulated in equity attributed to the owners of the Company and non-controlling interests as appropriate.

On the disposal of the Group's entire interest in a foreign operation, or a disposal involving loss of control over a subsidiary that includes a foreign operation, all of the exchange differences accumulated in equity in respect of that operation attributable to the owners of the Company are reclassified to profit or loss.

In relation to a partial disposal of a subsidiary that does not result in the Group losing control over the subsidiary, the proportionate share of accumulated exchange differences is re-attributed to the non-controlling interests of the subsidiary and is not recognized in profit or loss. For all other partial disposals, the proportionate share of the accumulated exchange differences recognized in other comprehensive income is reclassified to profit or loss.

g. Inventories and Inventories Related to Real Estate Business

Inventories, including raw materials (materials received from customers for processing, mainly semiconductor wafers, are excluded from inventories as title and risk of loss remain with the customers), supplies, work in process, finished goods, and materials and supplies in transit are stated at the lower of cost or net realizable value. Inventory write-downs are made by item, except for those that may be appropriate to group items of similar or related inventories. Net realizable value is the estimated selling prices of inventories less all estimated costs of completion and estimated costs necessary to make the sale. Raw materials and supplies are recorded at moving average cost while work in process and finished goods are recorded at standard cost.

Table of Contents

Inventories related to real estate business include land and buildings held for sale, land held for construction and construction in progress. Land held for development is recorded as land held for construction upon obtaining the title of ownership. Prior to the completion, the borrowing costs directly attributable to construction in progress are capitalized as part of the cost of the asset. Construction in progress is transferred to land and buildings held for sale upon completion. Land and buildings held for sale, construction in progress and land held for construction are stated at the lower of cost or net realizable value and related write-downs are made by item. The amounts received in advance for real estate properties are first recorded as advance receipts and then recognized as revenue when the construction is completed and the title and significant risk of the real estate properties are transferred to customers. Cost of sales of land and buildings held for sale are recognized based on the ratio of property sold to the total property developed.

h. Investments in associates and joint ventures

An associate is an entity over which the Group has significant influence and that is neither a subsidiary nor an interest in a joint venture. Joint venture is a joint arrangement whereby the Group and other parties that have joint control of the arrangement have rights to the net assets of the arrangement.

Under the equity method, investments in an associate and a joint venture are initially recognized at cost and adjusted thereafter to recognize the Group's share of the profit or loss and other comprehensive income of the associate and joint venture. The Group also recognizes the changes in the Group's share of equity of associates and joint venture.

Any excess of the cost of acquisition over the Group's share of the fair value of the net identifiable assets and liabilities of an associate or a joint venture at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment and is not amortized.

Gains and losses resulting from upstream, downstream and sidestream transactions between the Group (including its subsidiaries) and its associates or joint ventures are recognized in the Group's consolidated financial statements only to the extent of interests in the associates or joint ventures that are not related to the Group.

i. Property, Plant and Equipment

Except for land which is stated at cost, property, plant and equipment are stated at cost less accumulated depreciation and accumulated impairment.



Properties in the course of construction are carried at cost, less any recognized impairment loss. Cost includes professional fees and borrowing costs eligible for capitalization. Such assets are depreciated and classified to the appropriate categories of property, plant and equipment when completed and ready for intended use.

Freehold land is not depreciated.

Depreciation of property, plant and equipment is recognized using the straight-line method. Each significant part is depreciated separately. If the lease term is shorter than the assets' useful lives, such assets are depreciated over the lease term. The estimated useful lives, residual values and depreciation method are reviewed at each balance sheet date, with the effect of any changes in estimate accounted for on a prospective basis.

On derecognition of an item of property, plant and equipment, the difference between the sales proceeds and the carrying amount of the asset is recognized in profit or loss.

F-25

Table of Contents

j. Investment properties

Investment properties are properties held to earn rentals and/or for capital appreciation (including property under construction for such purposes).

Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are measured at cost less accumulated depreciation and accumulated impairment loss. Depreciation is recognized using the straight-line method.

Investment properties under construction are stated at cost less accumulated depreciation and accumulated impairment loss. Cost includes professional fees and, borrowing costs eligible for capitalization. Depreciation of these assets commences when the assets are ready for their intended use.

On derecognition of an investment property, the difference between the net disposal proceeds and the carrying amount of the asset is included in profit or loss.

k. Goodwill

Goodwill arising from an acquisition of a business is carried at cost as established at the date of acquisition of the business less accumulated impairment loss.

For the purposes of impairment testing, goodwill is allocated to each of the Group's cash-generating units or groups of cash-generating units (referred to as "cash-generating units") that is expected to benefit from the synergies of the combination.

A cash-generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired, by comparing its carrying amount, including the attributed goodwill, with its recoverable amount. However, if the goodwill allocated to a cash-generating unit was acquired in a business combination during the current annual period, that unit shall be tested for impairment before the end of the current annual period. If the recoverable amount of the cash-generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then pro rata to the other assets of the unit based on the carrying amount of each asset in the unit. Any impairment loss is recognized directly in profit or loss. An impairment loss recognized for goodwill is not reversed in subsequent

periods.

1. Other Intangible Assets

Other intangible assets with finite useful lives acquired separately are initially measured at cost and subsequently measured at cost less accumulated amortization and accumulated impairment loss. Other intangible assets are amortized based on the pattern in which the economic benefits are consumed or using the straight-line method over their estimated useful lives. The estimated useful lives, residual values, and amortization methods are reviewed at each balance sheet date, with the effect of any changes in estimate being accounted for on a prospective basis.

Other intangible assets acquired in a business combination and recognized separately from goodwill are initially recognized at their fair value at the acquisition date which is regarded as their cost. Subsequent to initial recognition, they are measured on the same basis as intangible assets that are acquired separately.

On derecognition of an intangible asset, the difference between the net disposal proceeds and the carrying amount of the asset are recognized in profit or loss.

F-26

Table of Contents

m. Impairment of Tangible and Intangible Assets Other than Goodwill

At each balance sheet date, the Group reviews the carrying amounts of its tangible and intangible assets, excluding goodwill, to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. Corporate assets are allocated to the individual cash-generating units on a reasonable and consistent basis of allocation. The recoverable amount is the higher of fair value less costs to sell and value in use. If the recoverable amount of an asset or cash-generating unit is estimated to be less than its carrying amount, the carrying amount of the asset or cash-generating unit is reduced to its recoverable amount, with the resulting impairment loss recognized in profit or loss.

When an impairment loss is subsequently reversed, the carrying amount of the asset or cash-generating unit is increased to the revised estimate of its recoverable amount, but only to the extent of the carrying amount that would have been determined had no impairment loss been recognized for the asset or cash-generating unit in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

n. Financial Instruments

Financial assets and financial liabilities are recognized when a group entity becomes a party to the contractual provisions of the instruments. Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognized immediately in profit or loss.

1) Financial assets

All regular way purchases or sales of financial assets are recognized or derecognized on a settlement date basis.

a) Measurement category

The classification of financial assets held by the Group depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

Financial assets are classified as at FVTPL when the financial assets are either held for trading or they are designated as at FVTPL.

A financial asset other than a financial asset held for trading may be designated as at FVTPL upon initial recognition if:

- Such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or

- The financial asset forms part of a group of financial assets or financial liabilities or both, which is managed and has performance evaluated on a fair value basis, in accordance with the Group’s documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or

Table of Contents

- The contract contains one or more embedded derivatives so that the entire hybrid (combined) contract can be designated as at FVTPL.

Financial assets at FVTPL are stated at fair value with any gains or losses arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss incorporates any dividend or interest earned on the financial asset.

Fair value is determined in the manner described in Note 34.

ii Available-for-sale financial assets

Available-for-sale financial assets are non-derivatives that are either designated as available-for-sale or are not classified as (a) loans and receivables, (b) held-to-maturity investments or (c) financial assets at fair value through profit or loss.

Available-for-sale financial assets are stated at fair value at each balance sheet date. Changes in the carrying amount of available-for-sale monetary financial assets relating to changes in foreign currency rates, interest income calculated using the effective interest method and dividends on available-for-sale equity investments are recognized in profit or loss. Other changes in the carrying amount of available-for-sale financial assets are recognized in other comprehensive income and accumulated under the heading of unrealized gain (loss) on available-for-sale financial assets. When the investment is disposed of or is determined to be impaired, the cumulative gain or loss previously accumulated in the unrealized gain (loss) on available-for-sale financial assets is reclassified to profit or loss.

Dividends on available-for-sale equity instruments are recognized in profit or loss when the Group's right to receive the dividends is established.

iii Loans and receivables

Loans and receivables including cash and cash equivalents, trade receivables, other receivables and other financial assets are measured at amortized cost using the effective interest method, less any impairment. Interest income is recognized by applying the effective interest rate, except for short-term receivables when the effect of discounting is immaterial.

Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value.

b) Impairment of financial assets

Financial assets, other than those at FVTPL, are assessed for indicators of impairment at each balance sheet date. Financial assets are considered to be impaired when there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial assets, the estimated future cash flows of the investments have been affected.

For financial assets carried at amortized cost, such as trade receivables and other receivables, assets that are assessed not to be impaired individually are, further, assessed for impairment on a collective basis. The Group assesses the collectability of receivables based on the Group's past experience of collecting payments and observable changes that correlate with default on receivables.

Table of Contents

For financial assets carried at amortized cost, the amount of the impairment loss recognized is the difference between the assets' carrying amounts and the present value of estimated future cash flows, discounted at the financial assets' original effective interest rates. If, in a subsequent period, the amount of the impairment loss decreases and the decreases can be objectively related to an event occurring after the impairment loss recognized, the previously recognized impairment loss is reversed either directly or by adjusting an allowance account through profit or loss. The reversal shall not result in carrying amounts of financial assets that exceed what the amortized cost would have been at the date the impairment is reversed.

For any available-for-sale equity investments, a significant or prolonged decline in the fair value of the security below its cost is considered to be objective evidence of impairment. When an available-for-sale financial asset is considered to be impaired, cumulative gains or losses previously recognized in other comprehensive income are reclassified to profit or loss in the period.

In respect of available-for-sale equity securities, impairment loss previously recognized in profit or loss is not reversed through profit or loss. Any increase in fair value subsequent to an impairment loss is recognized in other comprehensive income. In respect of available-for-sale debt securities, impairment loss is subsequently reversed through profit or loss if an increase in the fair value of the investment can be objectively related to an event occurring after the recognition of the impairment loss.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables where the carrying amount is reduced through the use of an allowance account. When a trade receivable is considered uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against the allowance account. Changes in the carrying amount of the allowance account are recognized in profit or loss except for uncollectible trade receivables that are written off against the allowance account.

c) Derecognition of financial assets

The Group derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. On derecognition of a financial asset in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognized in other comprehensive income and accumulated in equity is recognized in profit or loss.

2) Equity instruments



Debt and equity instruments issued by a group entity are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

Equity instruments issued by a group entity are recognized at the proceeds received, net of direct issue costs.

Repurchase of the Company's own equity instruments is recognized in and deducted directly from equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Company's own equity instruments.

3)

Financial liabilities

Financial liabilities are measured either at amortized cost using the effective interest method or at FVTPL. Financial liabilities measured at FVTPL are held for trading.

F-29

Table of Contents

Financial liabilities at FVTPL are stated at fair value, with any gain or loss arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss incorporates any interest or dividend paid on the financial liability. Fair value is determined in the manner described in Note 34.

The Group derecognizes financial liabilities when, and only when, the Group's obligations are discharged, cancelled or they expire. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable is recognized in profit or loss.

4) Derivative financial instruments

Derivatives are initially recognized at fair value at the date the derivative contracts are entered into and are subsequently remeasured to their fair value at each balance sheet date. The resulting gain or loss is recognized in profit or loss immediately unless the derivative is designated and effective as a hedging instrument, in which event the timing of the recognition in profit or loss depends on the nature of the hedge relationship. When the fair value of derivative financial instruments is positive, the derivative is recognized as a financial asset; when the fair value of derivative financial instruments is negative, the derivative is recognized as financial liabilities.

Derivatives embedded in non-derivative host contracts are treated as separate derivatives when they meet the definition of a derivative, their risks and characteristics are not closely related to those of the host contracts and the contracts are not measured at FVTPL.

5) Convertible bonds

a) Convertible bonds contain conversion option classified as an equity

The component parts of compound instruments (convertible bonds) issued by the Group are classified separately as financial liabilities and equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

On initial recognition, the fair value of the liability component is estimated using the prevailing market interest rate for similar non-convertible instruments. This amount is recorded as a liability on an amortized cost basis using the effective interest method until extinguished upon conversion or the instrument's maturity date. Any embedded derivative liability is measured at fair value.

The conversion option classified as equity is determined by deducting the amount of the liability component from the fair value of the compound instrument as a whole. This is recognized and included in equity, net of income tax effects, and is not subsequently remeasured. In addition, the conversion option classified as equity will remain in equity until the conversion option is exercised, in which case, the balance recognized in equity will be transferred to capital surplus - share premium. When the conversion option remains unexercised at maturity, the balance recognized in equity will be transferred to capital surplus - share premium.

Transaction costs that relate to the issue of the convertible bonds are allocated to the liability and equity components in proportion to the allocation of the gross proceeds. Transaction costs relating to the equity component are recognized directly in equity. Transaction costs relating to the liability component are included in the carrying amount of the liability component.

b) Convertible bonds contain conversion option classified as a liability

The conversion options component of the convertible bonds issued by the Group that will be settled other than by the exchange of a fixed amount of cash or other financial asset for a fixed number of the Group's own equity instruments is classified as derivative financial liabilities.

Table of Contents

On initial recognition, the derivative financial liabilities component of the convertible bonds is recognized at fair value, and the initial carrying amount of the component of non-derivative financial liabilities is determined by deducting the amount of derivative financial liabilities from the fair value of the hybrid instrument as a whole. In subsequent periods, the non-derivative financial liabilities component of the convertible bonds is measured at amortized cost using the effective interest method. The derivative financial liabilities component is measured at fair value and the changes in fair value are recognized in profit or loss.

Transaction costs that relate to the issue of the convertible bonds are allocated to the derivative financial liabilities component and the non-derivative financial liabilities component in proportion to their relative fair values. Transaction costs relating to the derivative financial liabilities component are recognized immediately in profit or loss. Transaction costs relating to the non-derivative financial liabilities component are included in the carrying amount of the liability component.

o. Hedge Accounting

The Group designates certain hedging instruments as fair value hedges.

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recognized in profit or loss immediately, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk. The change in the fair value of the hedging instrument and the change in the hedged item attributable to the hedged risk are recognized in profit or loss in the line item relating to the hedged item.

Hedge accounting is discontinued prospectively when the Group revokes the designated hedging relationship; when the hedging instrument expires or is sold, terminated, or exercised; or when the hedging instrument no longer meets the criteria for hedge accounting.

p. Revenue Recognition

Revenue is measured at the fair value of the consideration received or receivable take into account of estimated customer returns, rebates and other similar allowances.

1) Sale of goods and real estate properties

Revenue from the sale of goods and real estate properties is recognized when the goods and real estate properties are delivered and titles have passed, at the time all the following conditions are satisfied:

- The Group has transferred to the buyer the significant risks and rewards of ownership of the goods and real estate properties;
  
- The Group retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods and real estate properties sold;
  
- The amount of revenue can be reliably measured;
  
- It is probable that the economic benefits associated with the transaction will flow to the Group; and
  
- The costs incurred or to be incurred in respect of the transaction can be reliably measured.

Table of Contents

2) Rendering of services

Service income is recognized when services are rendered.

3) Dividend and interest income

Dividend income from investments and interest income from financial assets are recognized when they are probable that the economic benefits will flow to the Group and the amount of income can be reliably measured. Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable.

q. Leasing

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

The Group as lessor

Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease.

The Group as lessee

Assets held under finance leases are initially recognized as assets of the Group at their fair value at the inception of the lease or, if lower, at the present value of the minimum lease payments. The corresponding liability to the lessor is included in the consolidated balance sheets as a finance lease obligation.

Operating lease payments are recognized as expenses on a straight-line basis over the lease term.

r. Borrowing Costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalization.

Other than stated above, all other borrowing costs are recognized in profit or loss in the period in which they are incurred.

s. Government grants

Government grants are not recognized until there is reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received.

Government grants are recognized in profit or loss on a systematic basis over the periods in which the Group recognizes as expenses the related costs for which the grants are intended to compensate. Specifically, government grants whose primary condition is that the Group should purchase, construct or otherwise acquire non-current assets are recognized as deferred revenue in the consolidated financial statements and transferred to profit or loss on a systematic and rational basis over the useful lives of the related assets.

Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future related costs are recognized in profit or loss in the period in which they become receivable.

Table of Contents

t. Retirement Benefit Costs

Payments to defined contribution retirement benefit plans are recognized as expenses when employees have rendered services entitling them to the contributions.

Defined benefit costs (including service cost, net interest and rereasurement) under the defined benefit retirement benefit plans are determined using the projected unit credit method. Service cost (including current service cost and past service cost) and net interest on the net defined benefit liability (asset) are recognized as employee benefits expense in the period they occur. Rereasurement, comprising actuarial gains and losses and the return on plan assets (excluding interest), is recognized in other comprehensive income in the period in which they occur. Rereasurement recognized in other comprehensive income is reflected immediately in retained earnings and will not be reclassified to profit or loss.

Net defined benefit liability (asset) represents the actual deficit (surplus) in the Group's defined benefit plan. Any surplus resulting from this calculation is limited to the present value of any refunds from the plans or reductions in future contributions to the plans.

u. Employee share options

Employee share options granted to employees are measured at the fair value at the grant date. The fair value determined at the grant date is expensed on a straight-line basis over the vesting period, based on the Group's best estimate of the number of options that are expected to ultimately vest, with a corresponding increase in capital surplus - employee share options and non-controlling interests. It is recognized as an expense in full at the grant date if vesting immediately.

At each balance sheet date, the Group reviews its estimate of the number of employee share options expected to vest. The impact of the revision of the original estimates is recognized in profit or loss such that the cumulative expense reflects the revised estimate, with a corresponding adjustment to the capital surplus - employee share options and non-controlling interests.

v. Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.



1)

Current tax

Income tax on unappropriated earnings (excluding earnings from foreign consolidated subsidiaries) at a rate of 10% is expensed in the year the earnings arise and adjusted to the extent that distributions are approved by the shareholders in the following year.

Adjustments of prior years' tax liabilities are added to or deducted from the current year's tax provision.

2)

Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences, unused loss carry-forward and unused tax credits for purchases of machinery and equipment to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized.

F-33

Table of Contents

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries except where the Group is able to control the reversal of the temporary differences and it is probable that the temporary differences will not reverse in the foreseeable future.

The carrying amounts of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of deferred tax assets to be utilized. A previously unrecognized deferred tax asset is also reviewed at each balance sheet date and recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which assets are realized or the liabilities are settled. The measurement of deferred tax assets and liabilities reflects the tax consequences that would follow from the manner in which the Group expects, at the balance sheet date, to recover or settle the carrying amounts of its assets and liabilities.

3) Current and deferred tax for the year

Current and deferred tax are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognized in other comprehensive income or directly in equity, respectively.

Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

w. U.S. Dollar Amounts

A translation of the consolidated financial statements into U.S. dollars is included solely for the convenience of the readers, and has been translated from New Taiwan dollar (NT\$) at the exchange rate as set forth in the statistical release by the U.S. Federal Reserve Board of the United States, which was NT\$29.64 to US\$1.00 as of December 31, 2017. The translation should not be construed as a representation that the NT\$ amounts have been, could have been, or could in the future be, converted into U.S. dollars at this or any other rate of exchange.

5. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Group's accounting policies, which are described in Note 4, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and underlying assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

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

#### Impairment of Goodwill

Determining whether goodwill is impaired requires an estimation of the value in use of the cash-generating units to which goodwill has been allocated. The value in use calculation requires management to estimate the future cash flows expected to arise from cash-generating units and suitable discount rates in order to calculate its present value. When the actual future cash flows are less than expected, a material impairment loss may arise.

Table of Contents**6. CASH AND CASH EQUIVALENTS**

	December 31		
	2016	2017	
	NT\$	NT\$	US\$ (Note 4)
Cash on hand	\$6,856	\$8,404	\$284
Checking accounts and demand deposits	28,823,763	39,697,319	1,339,316
Cash equivalents	9,561,905	6,372,343	214,991
	\$38,392,524	\$46,078,066	\$1,554,591

Cash equivalents include time deposits that are of a short maturity of three months or less from the date of acquisitions, and are highly liquid, readily convertible to known amounts in cash and the risk of changes in values is insignificant. Cash equivalents are held for the purpose of meeting short-term cash commitments rather than for investments or other purposes.

**7. FINANCIAL INSTRUMENTS AT FAIR VALUE THROUGH PROFIT OR LOSS**

	December 31		
	2016	2017	
	NT\$	NT\$	US\$ (Note 4)
Financial assets designated as at FVTPL			
Private-placement convertible bonds	\$100,583	\$100,496	\$3,391
Financial assets held for trading			
Quoted shares	\$1,855,073	\$4,410,732	\$148,810
Open-end mutual funds	584,945	589,976	19,905
Forward exchange contracts	66,872	61,325	2,069
Swap contracts	462,339	60,538	2,042
	2,969,229	5,122,571	172,826
	\$3,069,812	\$5,223,067	\$176,217
Financial liabilities held for trading			
Swap contracts	\$422,934	\$652,107	\$22,001
Forward exchange contracts	108,912	25,323	854
	1,213,890	-	-

Conversion option, redemption option and put option of convertible bonds  
(Note 20)

Foreign currency option contracts	17,924	-	-
	\$1,763,660	\$677,430	\$22,855

Private-placement convertible bonds included embedded derivative instruments which were not closely related to the host contracts and the Group designated the entire contracts as financial assets at FVTPL on initial recognition.

At each balance sheet date, the outstanding swap contracts not accounted for hedge accounting were as follows:

F-35

Table of Contents

<b>Currency</b>	<b>Maturity Period</b>	<b>Notional Amount (In Thousands)</b>
December 31, 2016		
Sell NT\$/Buy US\$	2017.01-2017.12	NT\$59,797,499/US\$1,871,000
Sell US\$/Buy CNY	2017.03	US\$49,904/CNY349,800
Sell US\$/Buy JPY	2017.02	US\$77,153/JPY8,600,000
Sell US\$/Buy NT\$	2017.01	US\$61,000/NT\$1,958,908

## December 31, 2017

Sell NT\$/Buy US\$	2018.01-2018.12	NT\$53,136,302/US\$1,782,400
Sell US\$/Buy CNY	2018.01	US\$52,948/CNY349,800
Sell US\$/Buy JPY	2018.02-2018.03	US\$70,324/JPY7,870,000
Sell US\$/Buy NT\$	2018.01	US\$217,300/NT\$6,505,767

At each balance sheet date, the outstanding forward exchange contracts not accounted for hedge accounting were as follow:

<b>Currency</b>	<b>Maturity Period</b>	<b>Notional Amount (In Thousands)</b>
December 31, 2016		
Sell NT\$/Buy US\$	2017.01-2017.02	NT\$2,842,330/US\$90,000
Sell US\$/Buy CNY	2017.01-2017.02	US\$70,000/CNY484,805
Sell US\$/Buy JPY	2017.01-2017.02	US\$43,877/JPY5,063,820
Sell US\$/Buy KRW	2017.01	US\$35,000/KRW41,012,700
Sell US\$/Buy MYR	2017.01-2017.02	US\$19,000/MYR84,544
Sell US\$/Buy NT\$	2017.01-2017.03	US\$190,000/NT\$6,099,400
Sell US\$/Buy SGD	2017.01-2017.03	US\$12,900/SGD18,080
Sell US\$/Buy EUR	2017.01	US\$281/EUR270

## December 31, 2017

Sell NT\$/Buy US\$	2018.01	NT\$2,389,620/US\$80,000
Sell US\$/Buy CNY	2018.01-2018.04	US\$125,000/CNY828,858
Sell US\$/Buy EUR	2018.01	US\$10,674/EUR9,000
Sell US\$/Buy JPY	2018.01-2018.02	US\$45,517/JPY5,111,101
Sell US\$/Buy MYR	2018.01-2018.03	US\$15,000/MYR61,859
Sell US\$/Buy NT\$	2018.01	US\$1,000/NT\$30,142
Sell US\$/Buy SGD	2018.01-2018.02	US\$11,300/SGD15,305

At each balance sheet date, the outstanding foreign currency option contracts not accounted for hedge accounting were as follows:

<b>Currency</b>	<b>Maturity Period</b>	<b>Notional Amount (In Thousands)</b>
December 31, 2016		
Buy US\$ Call/CNY Put	2017.08 (Note)	US\$2,000/CNY13,800
Sell US\$ Put/CNY Call	2017.08 (Note)	US\$1,000/CNY6,900

F-36

Table of Contents

The contracts will be settled once a month and the counterparty has the right to early terminate the contracts, or Note: the contracts will be early terminated or both parties will have no obligation to settle the contracts when the specific criteria are met.

## 8. AVAILABLE-FOR-SALE FINANCIAL ASSETS

	December 31		US\$ (Note 4)
	2016	2017	
	NT\$	NT\$	
Unquoted ordinary shares	\$553,350	\$605,110	\$20,415
Quoted ordinary shares	146,786	279,791	9,440
Limited partnership	273,372	246,072	8,302
Unquoted preferred shares	78,068	57,367	1,935
Open-end mutual funds	243,458	23,825	804
	1,295,034	1,212,165	40,896
Current	266,696	89,159	3,008
Non-current	\$1,028,338	\$1,123,006	\$37,888

## 9. TRADE RECEIVABLES, NET

	December 31		US\$ (Note 4)
	2016	2017	
	NT\$	NT\$	
Trade receivables	\$51,199,266	\$55,265,607	\$1,864,562
Less: Allowance for doubtful debts	53,709	64,901	2,190
Trade receivables, net	\$51,145,557	\$55,200,706	\$1,862,372

The Group's average credit terms were 30 to 90 days. Allowance for doubtful debts is assessed by reference to the collectability of receivables by evaluating the account aging, historical experience and current financial condition of customers.

As of December 31, 2016 and 2017, except that the Group's five largest customers accounted for 30% and 33% of accounts receivable, respectively, the concentration of credit risk is insignificant for the remaining accounts receivable.



Aging of receivables based on the past due date

	December 31		
	2016	2017	
	NT\$	NT\$	US\$ (Note 4)
Not past due	\$45,959,876	\$49,599,512	\$1,673,398
1 to 30 days	4,467,435	4,986,491	168,235
31 to 90 days	700,122	562,200	18,968
More than 91 days	71,833	117,404	3,961
Total	\$51,199,266	\$55,265,607	\$1,864,562

F-37

Table of ContentsAging of receivables that were past due but not impaired

	December 31		
	2016	2017	
	NT\$	NT\$	US\$ (Note 4)
1 to 30 days	\$4,449,479	\$4,942,677	\$166,757
31 to 90 days	596,647	378,526	12,771
Total	\$5,046,126	\$5,321,203	\$179,528

Except for those impaired, the Group had not provided an allowance for doubtful debts on trade receivables at each balance sheet date since there has not been a significant change in credit quality and the amounts were still considered collectible. The Group did not hold any collateral or other credit enhancements over these balances nor did it have a legal right to offset against any amounts owed by the Group to counterparties.

Movement of the allowance for doubtful trade receivables

	<b>Impaired Individually</b>	<b>Impaired Collectively</b>	Total
	NT\$	NT\$	NT\$
Balance at January 1, 2015	\$ 28,305	\$ 55,840	\$84,145
Impairment losses recognized (reversed)	18,816	(10,584 )	8,232
Amount written off	(7,617 )	(209 )	(7,826 )
Effect of foreign currency exchange differences	(458 )	(1,187 )	(1,645 )
Balance at December 31, 2015	39,046	43,860	82,906
Impairment losses reversed	(21,501 )	(6,521 )	(28,022)
Effect of foreign currency exchange differences	(1,092 )	(83 )	(1,175 )
Balance at December 31, 2016	16,453	37,256	53,709
Impairment losses recognized	9,527	4,102	13,629
Amounts written off	-	(34 )	(34 )
Effect of foreign currency exchange differences	(850 )	(1,553 )	(2,403 )

Balance at December 31, 2017	\$ 25,130	\$ 39,771	\$64,901
	<b>Impaired</b>	<b>Impaired</b>	Total
	<b>Individually</b>	<b>Collectively</b>	
	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)
Balance at January 1, 2017	\$ 555	\$ 1,257	\$1,812
Impairment losses recognized	322	138	460
Amounts written off	-	(1 )	(1 )
Effect of foreign currency exchange differences	(29 )	(52 )	(81 )
Balance at December 31, 2017	\$ 848	\$ 1,342	\$2,190

F-38

Table of Contents

## 10. INVENTORIES

	December 31		US\$ (Note 4)
	2016	2017	
	NT\$	NT\$	
Finished goods	\$6,519,465	\$6,740,816	\$227,423
Work in process	2,822,687	3,452,332	116,475
Raw materials	10,850,062	12,625,502	425,962
Supplies	795,093	894,196	30,168
Raw materials and supplies in transit	450,755	548,065	18,491
	\$21,438,062	\$24,260,911	\$818,519

The cost of inventories recognized as operating costs for the years ended December 31, 2015, 2016 and 2017 were NT\$233,165,722 thousand, NT\$219,630,270 thousand (retrospectively adjusted) and NT\$237,193,286 thousand (US\$8,002,473 thousand), respectively, which included write-downs of inventories at NT\$352,011 thousand, NT\$451,780 thousand and NT\$398,824 thousand (US\$13,456 thousand), respectively.

## 11. INVENTORIES RELATED TO REAL ESTATE BUSINESS

	December 31		US\$ (Note 4)
	2016	2017	
	NT\$	NT\$	
Land and buildings held for sale	\$263,526	\$25,825	\$871
Construction in progress	22,236,464	8,106,166	273,488
Land held for construction	1,687,525	1,687,525	56,934
	\$24,187,515	\$9,819,516	\$331,293

Land and buildings held for sale located in Kun Shan Qiandeng and Shanghai Zhangjiang, China were completed and successively sold. Construction in progress is mainly located on Hutai Road in Shanghai, China and Lidu Road in Kun Shan, China. The capitalized borrowing costs for the years ended December 31, 2015, 2016 and 2017 is disclosed in Note 24.

Construction in progress located on Caobao Road in Shanghai was completed in the third quarter of 2017 and immediately leased out for the lease business. As a result, the Group reclassified those buildings and land use right under the line item of "inventories related to real estate - construction in progress" to investment properties of

NT\$6,971,372 thousand (US\$235,201 thousand) and long-term prepayments for lease of NT\$5,798,449 thousand (US\$195,629 thousand), respectively. Please refer to Note 15.

As of December 31, 2016 and 2017, inventories related to real estate business of NT\$12,076,154 thousand and NT\$9,818,869 thousand (US\$331,271 thousand), respectively, are expected to be recovered longer than twelve months.

Refer to Note 36 for the carrying amount of inventories related to real estate business that had been pledged by the Group to secure bank borrowings.

Table of Contents

## 12. OTHER FINANCIAL ASSETS

	December 31		US\$ (Note 4)
	2016	2017	
	NT\$	NT\$	
Unsecured subordinate corporate bonds	\$1,000,000	\$1,000,000	\$33,738
Time deposits with original maturity of over three months	480,736	405,520	13,682
Guarantee deposits	178,103	170,594	5,756
Pledged time deposits (Note 36)	206,530	59,456	2,006
Others (Note 36)	13,698	7,270	245
	1,879,067	1,642,840	55,427
Current	558,686	472,340	15,936
Non-current	\$1,320,381	\$1,170,500	\$39,491

The annual interest rate of unsecured subordinate corporate bonds was both 3.50% as of December 31, 2016 and 2017.

## 13. INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD

	December 31		US\$ (Note 4)
	2016	2017 (Retrospectively Adjusted)	
	NT\$	NT\$	
Investments in associates	\$49,154,140	\$48,267,237	\$1,628,449
Investments in joint venture	670,550	486,514	16,414
	\$49,824,690	\$48,753,751	\$1,644,863

## a. Investments in associates

- 1) Investments in associates accounted for using the equity method consisted of the following:

Carrying Amount as of December 31  
2016 2017

Name of Associate	Main Business	Operating Location	<b>(Retrospectively Adjusted)</b>		US\$ (Note 4)
			NT\$	NT\$	
Material associate Siliconware Precision Industries Co., Ltd. ("SPIL") Associates that are not individually material	Engaged in assembly, testing and turnkey services of integrated circuits	ROC	\$45,898,225	\$45,210,371	\$1,525,316
Deca Technologies Inc. "DECA"	Holding company and the group engaged in manufacturing, development and marketing of wafer level packaging and interconnect technology	British Cayman Islands	1,813,677	1,583,124	53,412
Hung Ching Development & Construction Co. ("HC")	Engaged in the development, construction and leasing of real estate properties	ROC	1,156,833	1,248,711	42,129
Hung Ching Kwan Co. ("HCK")	Engaged in the leasing of real estate properties	ROC	321,120	309,630	10,447

(continued)





	After Retrospectively Adjusted NT\$	Before Retrospectively Adjusted NT\$
Investments accounted for using the equity method		
December 31, 2016		
DECA	\$ 1,813,677	\$ 1,820,329
AMPI	\$ 264,434	\$ 266,085

The aforementioned retrospective adjustments are accordingly recorded as a decrease of retained earnings as of December 31, 2016.

5) Fair values (Level 1 inputs in terms of IFRS 13) of investments in associates with available published price quotation are summarized as follows:

F-41

Table of Contents

	December 31		
	2016	2017	
	NT\$	NT\$	US\$ (Note 4)
SPIL	\$49,634,805	\$52,176,190	\$1,760,330
HC	\$1,310,829	\$1,695,156	\$57,191
AMPI	\$307,038	\$468,572	\$15,809

## 6) Summarized financial information in respect of the Group's material associate

The summarized financial information below represents amounts shown in SPIL's consolidated financial statements prepared in accordance with IFRSs and adjusted by the Group for equity method accounting purposes.

	December 31		
	2016	2017	
	NT\$	NT\$	US\$ (Note 4)
Current assets	\$50,451,295	\$49,065,912	\$1,655,395
Non-current assets	107,573,251	101,693,417	3,430,952
Current liabilities	(41,088,439)	(26,194,615)	(883,759)
Non-current liabilities	(17,518,410)	(27,213,266)	(918,126)
Equity	\$99,417,697	\$97,351,448	\$3,284,462
Proportion of the Group's ownership interest in SPIL	33.29	% 33.29	% 33.29
Net assets attributable to the Group	\$33,096,151	\$32,408,297	\$1,093,397
Goodwill	12,802,074	12,802,074	431,919
Carrying amount	\$45,898,225	\$45,210,371	\$1,525,316

	For the Year Ended December 31		
	2016	2017	
	NT\$	NT\$	US\$ (Note 4)
Operating revenue	\$85,111,913	\$83,554,385	\$2,818,974
Gross profit	\$15,027,247	\$12,464,792	\$420,540
Profit before income tax	\$7,351,661	\$4,347,810	\$146,687
Net profit for the year	\$5,484,462	\$2,822,231	\$95,217
Other comprehensive income (loss) for the year	(2,373,532)	579,057	19,536

Total comprehensive income for the year	\$3,110,930	\$3,401,288	\$114,753
Cash dividends received from SPIL	\$3,941,740	\$1,815,275	\$61,244

F-42

Table of Contents

## 7) Aggregate information of associates that are not individually material

	For the Year Ended December 31			US\$ (Note 4)
	2015 NT\$	2016 NT\$	2017 NT\$	
The Group's share of:				
Net profit (loss) for the year	\$120,749	\$(139,366)	\$(190,532)	\$(6,428)
Other comprehensive income (loss) for the year	(2,916 )	(115,650)	59,676	2,013
Total comprehensive income (loss) for the year	\$117,833	\$(255,016)	\$(130,856)	\$(4,415)

## b. Investments in joint venture

The Group's investment in a joint venture that was not individually material and accounted for using the equity method consisted of ASE Embedded Electronics Inc. ("ASEEE"). In May 2015, the Group and TDK Corporation ("TDK") entered into an agreement to establish a joint venture to invest in ASEEE. The Group additionally participated in ASEEE's cash capital increase with NT\$146,903 thousand in September 2016. As of December 31, 2016 and 2017, the percentages of ownership were both 51%. ASEEE are located in ROC and engaged in the production of embedded substrate. According to the joint arrangement, the Group and TDK must act together to direct the relevant operating activities and, as a result, the Group does not control ASEEE. The investment in ASEEE is accounted for using the equity method.

## 2) Aggregate information of the joint venture that is not individually material

	For the Year Ended December 31		US\$ (Note 4)
	2016 NT\$	2017 NT\$	
The Group's share of net loss and total comprehensive loss for the year	\$(90,478)	\$(184,366)	\$(6,220)

**14. PROPERTY, PLANT AND EQUIPMENT**

The carrying amounts of each class of property, plant and equipment were as follows:

December 31	
2016 NT\$	2017 NT\$

			US\$ (Note 4)
Land	\$3,365,013	\$3,258,518	\$109,937
Buildings and improvements	58,028,631	58,272,864	1,966,021
Machinery and equipment	72,700,762	66,185,198	2,232,969
Other equipment	2,089,581	1,588,113	53,580
Construction in progress and machinery in transit	7,696,254	5,863,713	197,831
	\$143,880,241	\$135,168,406	\$4,560,338

F-43

Table of ContentsFor the year ended December 31, 2015

	Land	Buildings and improvements	Machinery and equipment	Other equipment	Construction in progress and machinery  in transit	Total
	NT\$	NT\$	NT\$	NT\$	NT\$	NT\$
<b>Cost</b>						
Balance at January 1, 2015	\$3,348,018	\$86,725,254	\$233,669,627	\$7,182,574	\$5,862,217	\$336,787,690
Additions		132,584	553,496	401,417	27,193,324	28,280,821
Disposals	-	(405,040 )	(8,041,933 )	(232,555 )	(20,711 )	(8,700,239 )
Reclassification	-	8,579,472	18,054,712	389,783	(26,893,158)	130,809
Effect of foreign currency exchange differences	33,282	(584,338 )	(952,295 )	(18,811 )	256,088	(1,266,074 )
Balance at December 31, 2015	\$3,381,300	\$94,447,932	\$243,283,607	\$7,722,408	\$6,397,760	\$355,233,007
<b>Accumulated depreciation and impairment</b>						
Balance at January 1, 2015	\$-	\$30,329,544	\$149,497,980	\$5,365,887	\$7,164	\$185,200,575
Depreciation expense	-	4,790,646	23,372,408	775,716	-	28,938,770
Impairment losses recognized	-	120,424	31,116	-	106,589	258,129
Disposals	-	(308,895 )	(7,838,937 )	(224,509 )	-	(8,372,341 )
Reclassification	-	5,704	(11,920 )	3,008	-	(3,208 )
Effect of foreign currency exchange differences	-	(290,545 )	(482,349 )	(12,688 )	(411 )	(785,993 )
Balance at December 31, 2015	\$-	\$34,646,878	\$164,568,298	\$5,907,414	\$113,342	\$205,235,932

For the year ended December 31, 2016

	Land	Buildings and improvements	Machinery and equipment	Other equipment	Construction in progress and machinery	Total
--	------	-------------------------------	----------------------------	--------------------	---	-------

Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

	NT\$	NT\$	NT\$	NT\$	<b>in transit</b> NT\$	NT\$
<b>Cost</b>						
Balance at January 1, 2016	\$3,381,300	\$94,447,932	\$243,283,607	\$7,722,408	\$6,397,760	\$355,233,007
Additions	-	22,341	94,480	470,901	27,093,140	27,680,862
Disposals	-	(684,698 )	(5,956,179 )	(159,822 )	(268,782 )	(7,069,481 )
Reclassification	-	5,110,102	19,661,732	691,276	(25,463,285)	(175 )
Acquisitions through business combinations	-	-	-	1,159	-	1,159
Effect of foreign currency exchange differences	(16,287 )	(2,637,502 )	(8,882,884 )	(251,261 )	(45,291 )	(11,833,225 )
Balance at December 31, 2016	\$3,365,013	\$96,258,175	\$248,200,756	\$8,474,661	\$7,713,542	\$364,012,147
<b>Accumulated depreciation and impairment</b>						
Balance at January 1, 2016	\$-	\$34,646,878	\$164,568,298	\$5,907,414	\$113,342	\$205,235,932
Depreciation expense	-	5,114,263	22,983,290	864,061	-	28,961,614
Impairment losses recognized	-	620	876,123	5,564	5,924	888,231
Disposals	-	(449,198 )	(5,544,489 )	(151,875 )	(100,049 )	(6,245,611 )
Reclassification	-	(5,123 )	9,660	(4,537 )	-	-
Acquisitions through business combinations	-	-	-	824	-	824
Effect of foreign currency exchange differences	-	(1,077,896 )	(7,392,888 )	(236,371 )	(1,929 )	(8,709,084 )
Balance at December 31, 2016	\$-	\$38,229,544	\$175,499,994	\$6,385,080	\$17,288	\$220,131,906

Table of ContentsFor the year ended December 31, 2017

	Land	Buildings and improvements	Machinery and equipment	Other equipment	Construction in progress and machinery  in transit	Total
	NT\$	NT\$	NT\$	NT\$	NT\$	NT\$
<b>Cost</b>						
Balance at January 1, 2017	\$3,365,013	\$96,258,175	\$248,200,756	\$8,474,661	\$7,713,542	\$364,012,147
Additions	-	350,434	102,301	130,659	23,094,288	23,677,682
Disposals	-	(609,294 )	(8,449,949 )	(763,937 )	(73,248 )	(9,896,428 )
Reclassification	(35,965 )	6,483,392	18,331,738	174,947	(25,428,464)	(474,352 )
Effect of foreign currency exchange differences	(70,530 )	(2,294,779 )	(4,986,843 )	(204,250 )	557,595	(6,998,807 )
Balance at December 31, 2017	\$3,258,518	\$100,187,928	\$253,198,003	\$7,812,080	\$5,863,713	\$370,320,242
<b>Accumulated depreciation and impairment</b>						
Balance at January 1, 2017	\$-	\$38,229,544	\$175,499,994	\$6,385,080	\$17,288	\$220,131,906
Depreciation expense	-	5,156,558	22,722,307	746,422	-	28,625,287
Impairment losses recognized	-	2,310	286,880	368	-	289,558
Disposals	-	(478,903 )	(7,540,654 )	(720,319 )	(17,288 )	(8,757,164 )
Reclassification	-	(210,080 )	34,452	(24,117 )	-	(199,745 )
Effect of foreign currency exchange differences	-	(784,365 )	(3,990,174 )	(163,467 )	-	(4,938,006 )
Balance at December 31, 2017	\$-	\$41,915,064	\$187,012,805	\$6,223,967	\$-	\$235,151,836

	Land	Buildings and improvements	Machinery and equipment	Other equipment	Construction in progress and machinery  in transit	Total
	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)



## Cost

Balance at January 1,2017	\$ 113,529	\$ 3,247,577	\$ 8,373,845	\$ 285,920	\$ 260,241	\$ 12,281,112
Additions	-	11,823	3,451	4,408	779,160	798,842
Disposals	-	(20,556 )	(285,086 )	(25,774 )	(2,471 )	(333,887 )
Reclassification	(1,212 )	218,738	618,480	5,902	(857,911 )	(16,003 )
Effect of foreign currency exchange differences	(2,380 )	(77,422 )	(168,247 )	(6,891 )	18,812	(236,128 )
Balance at December 31, 2017	\$ 109,937	\$ 3,380,160	\$ 8,542,443	\$ 263,565	\$ 197,831	\$ 12,493,936

## Accumulated depreciation and impairment

Balance at January 1, 2017	\$-	\$ 1,289,796	\$ 5,921,052	\$ 215,421	\$ 583	\$ 7,426,852
Depreciation expense	-	173,973	766,610	25,183	-	965,766
Impairment losses recognized	-	78	9,679	12	-	9,769
Disposals	-	(16,157 )	(254,408 )	(24,302 )	(583 )	(295,450 )
Reclassification	-	(7,088 )	1,162	(814 )	-	(6,740 )
Effect of foreign currency exchange differences	-	(26,463 )	(134,621 )	(5,515 )	-	(166,599 )
Balance at December 31,2017	\$-	\$ 1,414,139	\$ 6,309,474	\$ 209,985	\$-	\$ 7,933,598

Due to the Group's future operation plans and capacity evaluation or production demands in segment of packaging and testing, the Group believed that a portion of property, plant and equipment does not qualify for the production needs and therefore recognized an impairment loss of NT\$258,129 thousand, NT\$888,231 thousand and NT\$289,558 thousand (US\$9,769 thousand) under the line item of other operating income and expenses in the consolidated statements of comprehensive income for the years ended December 31, 2015, 2016 and 2017, respectively. The recoverable amount of the impaired property, plant and equipment is determined on the basis of its value in use and the Group expects to derive zero future cash flows from these assets.

Each class of property, plant and equipment was depreciated on a straight-line basis over the following useful lives:

## Buildings and improvements

Main plant buildings	I0-40 years
Cleanrooms	I0-20 years
Others	K-20 years
Machinery and equipment	J-10 years
Other equipment	J-20 years

F-45

Table of Contents

The capitalized borrowing costs for the years ended December 31, 2015, 2016 and 2017 are disclosed in Note 24.

## 15. INVESTMENT PROPERTIES

	Land NT\$	Buildings and improvements NT\$	Total NT\$			
Cost						
Balance at January 1, 2017	\$-	\$ -	\$-			
Additions	-	186,535	186,535			
Disposals	-	(342 )	(342 )			
Transfers from inventories related to real estate business and property, plant and equipment	35,965	8,114,110	8,150,075			
Effects of foreign currency exchange differences	-	106,482	106,482			
Balance at December 31, 2017	\$35,965	\$ 8,406,785	\$8,442,750			
Accumulated depreciation and impairment						
Balance at January 1, 2017	\$-	\$ -	\$-			
Depreciation expenses	-	122,231	122,231			
Disposals	-	(161 )	(161 )			
Transfers from property, plant and equipment	-	199,745	199,745			
Effects of foreign currency exchange differences	-	1,499	1,499			
Balance at December 31, 2017	\$-	\$ 323,314	\$323,314			
<table border="0" style="margin-left: auto;"> <thead> <tr> <th style="text-align: center;">Land US\$ (Note 4)</th> <th style="text-align: center;">Buildings and improvements US\$ (Note 4)</th> <th style="text-align: center;">Total US\$ (Note 4)</th> </tr> </thead> </table>				Land US\$ (Note 4)	Buildings and improvements US\$ (Note 4)	Total US\$ (Note 4)
Land US\$ (Note 4)	Buildings and improvements US\$ (Note 4)	Total US\$ (Note 4)				
Cost						
Balance at January 1, 2017	\$-	\$ -	\$-			
Additions	-	6,293	6,293			
Disposals	-	(11 )	(11 )			
Transfers from inventories related to real estate business and property, plant and equipment	1,213	273,755	274,968			
Effects of foreign currency exchange differences	-	3,593	3,593			
Balance at December 31, 2017	\$1,213	\$ 283,630	\$284,843			

Accumulated depreciation and impairment

Balance at January 1, 2017	\$-	\$ -	\$-
Depreciation expenses	-	4,124	4,124
Disposals	-	(5	) (5 )
Transfers from property, plant and equipment	-	6,739	6,739
Effects of foreign currency exchange differences	-	50	50
Balance at December 31, 2017	\$-	\$ 10,908	\$10,908

F-46

Table of Contents

The investment properties are depreciated using the straight-line method over their estimated useful lives as follows:

Main buildings	10-40 years
Others	3-20 years

The fair value of the investment properties was approximately NT\$11,560,440 thousand (US\$390,028 thousand) which was measured using the market approach and the income approach based on level 3 inputs by independent professional appraisers.

Investment properties are held under freehold interests. Refer to Note 36 for the carrying amount of the investment properties that had been pledged by the Group to secure borrowings.

**16.****GOODWILL**

	Cost NT\$	Accumulated impairment NT\$	Carrying amount NT\$
Balance at January 1, 2015	\$12,434,411	\$1,988,996	\$10,445,415
Effect of foreign currency exchange differences	61,104	-	61,104
Balance at December 31, 2015	12,495,515	1,988,996	10,506,519
Acquisitions through business combinations (retrospectively adjusted) (Note 28)	15,323	-	15,323
Effect of foreign currency exchange differences	(31,533 )	-	(31,533 )
Balance at December 31, 2016 (retrospectively adjusted)	12,479,305	1,988,996	10,490,309
Impairment losses recognized	-	425,117	(425,117 )
Effect of foreign currency exchange differences	(130,698 )	-	(130,698 )
Balance at December 31, 2017	\$12,348,607	\$2,414,113	\$9,934,494

	Cost US\$ (Note 4)	Accumulated impairment US\$ (Note 4)	Carrying amount US\$ (Note 4)
Balance at January 1, 2017 (retrospectively adjusted) (Note 28)	\$421,029	\$ 67,105	\$353,924
Impairment losses recognized	-	14,343	(14,343 )
Effect of foreign currency exchange differences	(4,409 )	-	(4,409 )

Balance at December 31, 2017	\$416,620	\$ 81,448	\$335,172
------------------------------	-----------	-----------	-----------

a. Allocating goodwill to cash-generating units

Goodwill had been allocated to the following cash-generating units for impairment testing purposes: packaging segment, testing segment, EMS segment and other segment. The carrying amount of goodwill allocated to cash-generating units was as follows:

F-47

Table of Contents

	December 31 2016		
	(Retrospectively Adjusted)		
	NT\$	NT\$	US\$ (Note 4)
Cash-generating units			
Testing segment	\$7,868,961	\$7,775,581	\$262,334
Others	2,621,348	2,158,913	72,838
	\$10,490,309	\$9,934,494	\$335,172

## b. Impairment assessment

At the end of each year, the Group performs impairment assessment by reviewing the recoverable amounts based on value in use which incorporates cash flow projections covering a five-year period. The cash flows beyond that five-year period have been extrapolated using a steady 2.0% per annum growth rate. In assessing value in use, the estimated future cash flows are discounted to their present value using annual discount rates. The Group carried out a review that the recoverable amount of other segment was lower than its carrying amount since its actual growth in revenue did not meet its forecast previously made by management. The review led to the recognition of an impairment loss of NT\$425,117 thousand (US\$14,343 thousand) under the line item of other gains, net in the consolidated statements of comprehensive income for the year ended December 31, 2017.

The key assumptions used in the value in use calculations are growth rates for operating revenue and discount rates. Growth rates for operating revenue are based on the revenue forecast for the Group and the market as well as the Group's historical experience. The discount rates were 8.67%- 10.71%, 9.09%- 10.49% and 8.97%- 11.29% as of December 31, 2015, 2016 and 2017, respectively.

Management believed that any reasonably possible change in the key assumptions on which recoverable amount was based would not cause the aggregate carrying amount of the cash-generating unit to exceed its aggregate recoverable amount significantly.

## 17. OTHER INTANGIBLE ASSETS

The carrying amounts of each class of other intangible assets were as follows:

December 31

**2016****(Retrospectively<sup>2017</sup>  
Adjusted)**

	NT\$	NT\$	US\$ (Note 4)
Customer relationships	\$ 194,089	\$ 113,776	\$3,839
Computer software	943,527	864,331	29,161
Patents and acquired specific technology	359,227	319,402	10,776
Others	120,418	109,356	3,689
	\$ 1,617,261	\$ 1,406,865	\$47,465

F-48

Table of ContentsFor the year ended December 31, 2015

	Customer relationships	Computer software	Patents and acquired specific technology	Others	Total
	NT\$	NT\$	NT\$	NT\$	NT\$
Cost					
Balance at January 1, 2015	\$ 1,579,015	\$ 2,882,932	\$ 2,139,138	\$ 184,409	\$ 6,785,494
Additions	-	481,412	209	9,514	491,135
Disposals or derecognition	(663,379 )	(8,426 )	(1,983,914)	(204 )	(2,655,923)
Reclassification	-	12,360	-	-	12,360
Effect of foreign currency exchange differences	-	(29,918 )	(1,351 )	(381 )	(31,650 )
Balance at December 31, 2015	\$ 915,636	\$ 3,338,360	\$ 154,082	\$ 193,338	\$ 4,601,416
Accumulated amortization					
Balance at January 1, 2015	\$ 1,077,514	\$ 2,084,805	\$ 2,118,254	\$ 37,050	\$ 5,317,623
Amortization expense	227,099	325,856	9,461	17,478	579,894
Disposals or derecognition	(663,379 )	(7,402 )	(1,983,914)	-	(2,654,695)
Reclassification	-	3,190	-	-	3,190
Effect of foreign currency exchange differences	-	(21,411 )	(5,415 )	137	(26,689 )
Balance at December 31, 2015	\$ 641,234	\$ 2,385,038	\$ 138,386	\$ 54,665	\$ 3,219,323

For the year ended December 31, 2016 (Retrospectively Adjusted)

	Customer relationships	Computer software	Patents and acquired specific technology	Others	Total
	NT\$	NT\$	NT\$	NT\$	NT\$
Cost					
Balance at January 1, 2016	\$ 915,636	\$ 3,338,360	\$ 154,082	\$ 193,338	\$ 4,601,416
Additions (Note 35)	-	372,188	301,351	1,605	675,144
Disposals or derecognition	(41,099 )	(80,537 )	(1,310 )	-	(122,946 )
Reclassification	-	-	786	-	786
Acquisitions through business combinations	41,099	-	64,380	30	105,509
Effect of foreign currency exchange differences	-	(77,782 )	(4,846 )	(2,581 )	(85,209 )



Balance at December 31, 2016	\$ 915,636	\$3,552,229	\$ 514,443	\$ 192,392	\$5,174,700
------------------------------	------------	-------------	------------	------------	-------------

(continued)

F-49

Table of Contents

	Customer relationships	Computer software	Patents and acquired specific technology	Others	Total
	NT\$	NT\$	NT\$	NT\$	NT\$
Accumulated amortization					
Balance at January 1, 2016	\$ 641,234	\$2,385,038	\$ 138,386	\$54,665	\$3,219,323
Amortization expense	121,412	345,836	24,154	17,421	508,823
Disposals or derecognition	(41,099 )	(58,765 )	(1,310 )	-	(101,174 )
Reclassification	-	-	786	-	786
Acquisitions through business combinations	-	-	483	23	506
Effect of foreign currency exchange differences	-	(63,407 )	(7,283 )	(135 )	(70,825 )
Balance at December 31, 2016	\$ 721,547	\$2,608,702	\$ 155,216	\$71,974	\$3,557,439

(concluded)

For the year ended December 31, 2017

	Customer relationships	Computer software	Patents and acquired specific technology	Others	Total
	NT\$	NT\$	NT\$	NT\$	NT\$
Cost					
Balance at January 1, 2017 (retrospectively adjusted)	\$ 915,636	\$3,552,229	\$514,443	\$ 192,392	\$5,174,700
Additions	-	265,497	-	12,328	277,825
Disposals	-	(83,595 )	(123,744)	(4,978 )	(212,317 )
Effect of foreign currency exchange differences	-	(47,679 )	(1,213 )	(988 )	(49,880 )
Balance at December 31, 2017	\$ 915,636	\$3,686,452	\$ 389,486	\$ 198,754	\$5,190,328
Accumulated amortization					
Balance at January 1, 2017 (retrospectively adjusted)	\$ 721,547	\$2,608,702	\$ 155,216	\$71,974	\$3,557,439
Amortization expense	80,313	316,580	43,493	17,280	457,666
Disposals	-	(72,481 )	(123,743)	-	(196,224 )
Effect of foreign currency exchange differences	-	(30,680 )	(4,882 )	144	(35,418 )
Balance at December 31, 2017	\$ 801,860	\$2,822,121	\$70,084	\$89,398	\$3,783,463



Table of Contents

	Customer relationships	Computer software	Patents and acquired specific technology	Others	Total
	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)
Cost					
Balance at January 1, 2017 (retrospectively adjusted)	\$ 30,892	\$ 119,846	\$ 17,356	\$ 6,491	\$ 174,585
Additions	-	8,957	-	416	9,373
Disposals	-	(2,820 )	(4,175 )	(168 )	(7,163 )
Effect of foreign currency exchange differences	-	(1,609 )	(41 )	(34 )	(1,684 )
Balance at December 31, 2017	\$ 30,892	\$ 124,374	\$ 13,140	\$ 6,705	\$ 175,111
Accumulated amortization					
Balance at January 1, 2017 (retrospectively adjusted)	\$ 24,343	\$ 88,012	\$ 5,237	\$ 2,428	\$ 120,020
Amortization expense	2,710	10,681	1,467	583	15,441
Disposals	-	(2,445 )	(4,175 )	-	(6,620 )
Effect of foreign currency exchange differences	-	(1,035 )	(165 )	5	(1,195 )
Balance at December 31, 2017	\$ 27,053	\$ 95,213	\$ 2,364	\$ 3,016	\$ 127,646

Each class of other intangible assets were amortized on the straight-line basis over the following useful lives:

Customer relationships	11 years
Computer software	J-10 years
Patents and acquired specific technology	M-15 years
Others	M-32 years

18. LONG-TERM PREPAYMENTS FOR LEASE

Long-term prepayments for lease mainly represented land use rights located in China with periods for use from 40 to 70 years and will expire from 2049 to 2074, respectively.

19. BORROWINGS

a. Short-term borrowings

Short-term borrowings mainly represented unsecured revolving bank loans with annual interest rates at 0.70%-8.99% and 0.80%-4.79% as of December 31, 2016 and 2017, respectively.

b. Long-term borrowings

1) Bank loans

As of December 31, 2016 and 2017, the long-term bank loans with fixed interest rates were both amounted to NT\$1,500,000 thousand (US\$50,607 thousand) with annual interest rates at 1.20%. The long-term bank loans with fixed interest rates will be repayable in December 2018. The others were long-term bank loans with floating interest rates and consisted of the followings:

Table of Contents

	December 31		
	2016	2017	
	NT\$	NT\$	US\$ (Note 4)
Working capital bank loans			
Syndicated bank loans - repayable through January 2018 to July 2018, annual interest rates were 2.55% and 2.61% -2.70% as of December 31, 2016 and 2017, respectively	\$9,223,500	\$4,761,600	\$160,647
Others - repayable through January 2018 to December 2019, annual interest rates were 0.74%-4.48% and 0.93%-2.10% as of December 31, 2016 and 2017, respectively	36,009,917	22,441,947	757,151
Mortgage loans			
Repayable through July 2018 to June 2023, annual interest rates were both 4.95%-5.39% as of December 31, 2016 and 2017	4,390,003	4,705,149	158,743
	49,623,420	31,908,696	1,076,541
Less: unamortized arrangement fee	7,198	1,200	40
	49,616,222	31,907,496	1,076,501
Less: current portion	6,567,565	6,761,625	228,125
	\$43,048,657	\$25,145,871	\$848,376

Pursuant to the above syndicated bank loans agreements, the Company should maintain certain financial covenants including current ratio, leverage ratio, tangible net assets and interest coverage ratio. Such financial ratios are calculated based on the Group's annual audited consolidated financial statements or semi-annual reviewed consolidated financial statements. The Company was in compliance with all of the financial covenants as of December 31, 2016 and 2017.

## 2) Long-term bills payable

	December 31		
	2016	2017	
	NT\$	NT\$	US\$ (Note 4)
China Bills Finance Corporation, repayable in February 2019, annual interest rate was 0.96%	\$-	\$1,000,000	\$33,738
International Bills Finance Corporation, repayable in March 2019, annual interest rate was 0.96%	-	1,000,000	33,738
Ta Ching Bills Finance Corporation, annual interest rates was 1.00% and has been repaid in December 2017	2,000,000	-	-
	2,000,000	2,000,000	67,476
Less: unamortized discounts	659	868	29

Long-term borrowings	\$1,999,341	\$1,999,132	\$67,447
----------------------	-------------	-------------	----------

F-52

Table of Contents

20.

## BONDS PAYABLE

	December 31		
	2016	2017	US\$
	NT\$	NT\$	(Note 4)
Unsecured domestic bonds			
Repayable at maturity in January 2021 and interest due annually with annual interest rate at 1.30%	\$7,000,000	\$7,000,000	\$236,168
Repayable at maturity in January 2023 and interest due annually with annual interest rate at 1.50%	2,000,000	2,000,000	67,476
Repayable at maturity in January 2022 and interest due annually with annual interest rate at 1.25%	-	3,700,000	124,831
Repayable at maturity in January 2024 and interest due annually with annual interest rate at 1.45%	-	4,300,000	145,074
Unsecured convertible overseas bonds			
US\$400,000 thousand	12,900,000	-	-
US\$200,000 thousand (linked to New Taiwan dollar)	6,185,600	6,185,600	208,691
Secured overseas bonds - secured by the Company			
US\$300,000 thousand, interest due semi-annually with annual interest rate at 2.125% and has been repaid in July 2017	9,675,000	-	-
	37,760,600	23,185,600	782,240
Less: discounts on bonds payable	760,697	42,820	1,444
	36,999,903	23,142,780	780,796
Less: current portion	9,658,346	6,161,197	207,868
	\$27,341,557	\$16,981,583	\$572,928

In September 2013, the Company offered the third unsecured convertible overseas bonds (the “Bonds”) in US\$400,000 thousand. The Bonds is zero coupon bonds with the maturity of 5 years, in denominations of US\$200 thousand or in any integral multiples thereof. Each holder of the Bonds has the right at any time on or after October 16, 2013 and up to (and including) August 26, 2018, except during legal lock-up period, to convert the Bonds into a newly issued listed common shares at the conversion price NT\$33.085, determined on the basis of a fixed exchange rate of US\$1 to NT\$29.956. The conversion price will be adjusted in accordance with the conversion provisions due to anti-dilution clause. As of December 31, 2016, the conversion price was NT\$28.99. As of December 31, 2017, the Bonds holders have exercised the conversion right to convert the Bonds of US\$399,600 thousand into the company’s ordinary shares at conversion prices from NT\$27.95 (US\$0.94) to NT\$28.96 (US\$0.98).

The Bonds may be redeemed at the option of the Company, in whole or in part, at any time on or after the third anniversary of the offering date provided that (1) the closing price, translated into U.S. dollars, of the common shares for a period of 20 consecutive trading days is at least 130% of the conversion price, (2) at least 90% in aggregate principal amount of the Bonds originally outstanding has been redeemed, repurchased and canceled or converted, or (3) the Company is required to pay additional taxes on the Bonds as a result of certain changes in tax laws in the ROC.



Each holder shall have the right to request the Company repurchase all or any portion of the principal amount thereof of a holder's Bonds (1) on the third anniversary of the offering date, (2) in the event of a change of control, or (3) in the event of delisting.

F-53

Table of Contents

The Bonds contained a debt host contract, recognized as bonds payable, and the conversion option, redemption option and put option (collectively the “Bonds Options”) aggregately recognized as financial liabilities at FVTPL. The effective interest rate of the debt host contract was 3.16% and the aggregate fair value of the Bonds Options was NT\$1,667,950 thousand on initial recognition.

The Company’s board of directors resolved in third quarter of 2017 to issue a notice of early redemption to Bonds holders. In the third quarter of 2017, the closing price of the Company’s ordinary shares (translated into U.S. dollars at the prevailing rates) for a period of 20 consecutive trading days is higher than 130% of the conversion price in U.S. dollar translated at the fixed exchange rate of US\$1 to NT\$29.956 determined on pricing date per ordinary share. Therefore, except those have been converted, the Company early redeemed the outstanding Bonds of US\$400 thousand in September 2017.

In July 2015, the Company offered the forth unsecured convertible overseas bonds (the “Currency Linked Bonds”) in US\$200,000 thousand. The Currency Linked Bonds is zero coupon bonds with the maturity of 2.75 years, in denominations of US\$200 thousand or in any integral multiples thereof. Repayment, redemption and put amount denominated in U.S. dollar will be converted into New Taiwan dollar amount using a fixed exchange rate of US\$1 to NT\$30.928 (the “Fixed Exchange Rate”) and then converted back to U.S. dollar amount using the applicable prevailing rate at the time of repayment, redemption or put. Each holder of the Currency Linked Bonds has the right at any time on or after August 11, 2015 and up to (and including) March 17, 2018, except during legal lock-up period, to convert the Currency Linked Bonds into common shares at the conversion price NT\$54.55, determined on the basis of the Fixed Exchange Rate. The Company’s treasury shares will be available for delivery upon conversion of the Currency Linked Bonds. The conversion price will be adjusted in accordance with the conversion provisions due to anti-dilution clause. As of December 31, 2016 and 2017, the conversion price was NT\$49.52 and NT\$47.76 (US\$1.61), respectively.

The Currency Linked Bonds may be redeemed at the option of the Company, in whole or in part, at any time on or after March 19, 2018 provided that (1) the closing price, translated into U.S. dollars, of the common shares for a period of 20 out of 30 consecutive trading days is at least 130% of the conversion price, (2) at least 90% in aggregate principal amount of the Currency Linked Bonds originally outstanding has been redeemed, repurchased and canceled or converted, or (3) the Company is required to pay additional taxes on the Currency Linked Bonds as a result of certain changes in tax laws in the ROC.

Each holder shall have the right to request the Company repurchase all or any portion of the principal amount thereof of a holder’s Currency Linked Bonds (1) in the event of a change of control, or (2) in the event of delisting.

The Currency Linked Bonds contained a debt host contract, recognized as bonds payable, and the conversion option, recognized as capital surplus. The effective interest rate of the debt host contract was 1.58% and the fair value of the conversion option was NT\$214,022 thousand on initial recognition.

To focus on corporate sustainability and to carry out the commitment to environmental protection and energy conservation, Anstock II Limited, a subsidiary the Company 100% owned, offered overseas bonds in US\$300,000 thousand with the maturity of 3 years and annual interest rate of 2.125% (the “Green Bonds”) in July 2014. The Green Bonds are unconditionally and irrevocably guaranteed by the Company and the proceeds were used to fund certain eligible projects to promote the Group’s transition to low-carbon and climate resilient growth. As of December 31, 2017, the Company’s subsidiary has repaid the Green Bonds.

F-54

Table of Contents

## 21. OTHER PAYABLES

	December 31		US\$ (Note 4)
	2016	2017	
	NT\$	NT\$	
Accrued salary and bonus	\$6,606,406	\$7,292,254	\$246,027
Payables for property, plant and equipment	5,605,528	4,623,268	155,981
Accrued employees' compensation and remuneration to directors	2,400,778	2,568,880	86,669
Accrued employee insurance	617,419	657,176	22,172
Accrued utilities	410,796	417,257	14,077
Payables for patents and acquired specific technology (Note 35)	120,938	93,000	3,138
Others	5,760,169	5,726,052	193,187
	\$21,522,034	\$21,377,887	\$721,251

## 22. RETIREMENT BENEFIT PLANS

## a. Defined contribution plans

The pension plan under the ROC Labor Pension Act ("LPA") for the Group's ROC resident employees is a 1) government-managed defined contribution plan. Based on the LPA, the Company and its subsidiaries in Taiwan makes monthly contributions to employees' individual pension accounts at 6% of their monthly salaries.

2) The subsidiaries located in China, U.S.A., Malaysia, Singapore and Mexico also make contributions at various ranges according to relevant local regulations.

## b. Defined benefit plans

The Company and its subsidiaries in Taiwan joined the defined benefit pension plan under the ROC Labor Standards Law operated by the government. Pension benefits are calculated on the basis of the length of service and average monthly salaries of the last six months before retirement. The Company and its subsidiaries in Taiwan make contributions based on a certain percentage of their domestic employees' monthly salaries to a pension fund administered by the pension fund monitoring committee. Before the end of each year, the Company and its 1) subsidiaries in Taiwan assess the balance in the pension fund. If the amount of the balance in the pension fund is inadequate to pay retirement benefits for employees who conform to retirement requirements in the next year, the Company and its subsidiaries in Taiwan are required to fund the difference in one appropriation that should be made before the end of March of the next year. Pension contributions are deposited in the Bank of Taiwan in the committee's name and are managed by the Bureau of Labor Funds, Ministry of Labor ("the Bureau"); the Company and its subsidiaries in Taiwan have no right to influence the investment policy and strategy.

ASE Japan has a pension plan under which eligible employees with more than ten years of service are entitled to receive pension benefits based on their length of service and salaries at the time of termination of employment. ASE Japan makes contributions based on a certain amount of pension cost to employees.

ASE Korea also has a pension plan under which eligible employees and directors with more than one year of service are entitled to receive a lump-sum payment upon termination of their service with ASE Korea, based on their length of service and salaries at the time of termination. ASE Korea makes contributions based on a certain percentage of pension cost to an external financial institution administered by the management and in the names of employees.

F-55

Table of Contents

3) ASE Inc., ASE Test, Inc. and ASE Electronics Inc. maintain pension plans for executive managers. Pension costs under the plans were NT\$2,302 thousand, NT\$6,872 thousand and NT\$3,171 thousand (US\$107 thousand) for the years ended December 31, 2015, 2016 and 2017, respectively. Pension payments were NT\$2,549 thousand for the year ended December 31, 2015 and were both nil for the years ended December 31, 2016 and 2017. As of December 31, 2016 and 2017, accrued pension liabilities for executive managers were NT\$206,467 thousand and NT\$209,637 thousand (US\$7,073 thousand), respectively.

4) The amounts included in the consolidated balance sheets arising from the Group's obligation in respect of its defined benefit plans excluding those for executive managers were as follows:

	December 31		US\$ (Note 4)
	2016	2017	
	NT\$	NT\$	
Present value of the defined benefit obligation	\$8,389,884	\$7,910,638	\$266,891
Fair value of plan assets	(4,417,367)	(4,341,373)	(146,470)
Present value of unfunded defined benefit obligation	3,972,517	3,569,265	120,421
Recorded under other payables	(22,273 )	(24,638 )	(831 )
Recorded under other current assets	15,542	182,421	6,154
Net defined benefit liability	\$3,965,786	\$3,727,048	\$125,744

Movements in net defined benefit liability (asset) were as follows:

	Present value of the defined benefit obligation	Fair value of the plan assets	Net defined benefit liability (asset)
	NT\$	NT\$	NT\$
Balance at January 1, 2015	\$7,674,293	\$(3,502,487)	\$4,171,806
Service cost			
Current service cost	335,655	-	\$335,655
Net interest expense (income)	183,889	(108,356 )	75,533
Recognized in profit or loss	519,544	(108,356 )	411,188
Remeasurement			
Return on plan assets (excluding amounts included in net interest)	-	12,426	12,426
Actuarial loss arising from changes in financial assumptions	309,695	-	309,695

Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

Actuarial gain arising from experience adjustments	(243,363 )	-	(243,363 )
Actuarial gain arising from changes in demographic assumptions	(15,847 )	-	(15,847 )
Recognized in other comprehensive income	50,485	12,426	62,911
Contributions from the employer	-	(611,581 )	(611,581 )
Benefits paid from the pension fund	(192,928 )	192,928	-
Benefits paid from the Group	(43,088 )	-	(43,088 )
Exchange differences on foreign plans	(34,630 )	43,341	8,711
Balance at December 31, 2015	7,973,676	(3,973,729)	3,999,947
Service cost			
Current service cost	329,838	-	329,838
Net interest expense (income)	167,111	(109,080 )	58,031
Recognized in profit or loss	496,949	(109,080 )	387,869
Remeasurement			
Return on plan assets (excluding amounts included in net interest)	-	54,549	54,549
Actuarial loss arising from changes in financial assumptions	156,193	-	156,193
Actuarial loss arising from experience adjustments	200,723	-	200,723
Actuarial loss arising from changes in demographic assumptions	5,716	-	5,716
Recognized in other comprehensive income	362,632	54,549	417,181
Contributions from the employer	-	(807,232 )	(807,232 )
Benefits paid from the pension fund	(308,471 )	308,471	-
Benefits paid from the Group	(36,033 )	-	(36,033 )
(Continued)			

Table of Contents

	Present value of the defined benefit obligation NT\$	Fair value of the plan assets NT\$	Net defined benefit liability (asset) NT\$
Liabilities assumed in a business combination	\$535	\$ (535 )	\$-
Exchange differences on foreign plans	(99,404 )	110,189	10,785
Balance at December 31, 2016	8,389,884	(4,417,367)	3,972,517
Service cost			
Current service cost	278,412	-	278,412
Past service cost and gain on settlements	(68,979 )	-	(68,979 )
Net interest expense (income)	157,404	(103,741 )	53,663
Recognized in profit or loss	366,837	(103,741 )	263,096
Remeasurement			
Return on plan assets (excluding amounts included in net interest)	-	52,124	52,124
Actuarial loss arising from changes in financial assumptions	56,860	-	56,860
Actuarial gain arising from experience adjustments	(315,090 )	-	(315,090 )

(Continued)



Table of Contents

	Present value of the defined benefit obligation NT\$	Fair value of the plan assets NT\$	Net defined benefit liability (asset) NT\$
Actuarial loss arising from changes in demographic assumptions Recognized in other comprehensive income	\$762 (257,468 )	\$- 52,124	\$762 (205,344 )
Contributions from the employer	-	(484,790 )	(484,790 )
Benefits paid from the pension fund	(690,830 )	690,830	-
Benefits paid from the Group	(96,575 )	-	(96,575 )
Exchange differences on foreign plans	198,790	(78,429 )	120,361
Balance at December 31, 2017	\$7,910,638	\$(4,341,373)	\$3,569,265

(Concluded)

	Present value of the defined benefit obligation US\$ (Note 4)	Fair value of the plan assets US\$ (Note 4)	Net defined benefit liability (asset) US\$ (Note 4)
Balance at January 1, 2017	\$283,060	\$(149,034)	\$134,026
Service cost			
Current service cost	9,393	-	9,393
Past service cost and gain on settlements	(2,328 )	-	(2,328 )
Net interest expense (income)	5,311	(3,500 )	1,811
Recognized in profit or loss	12,376	(3,500 )	8,876

(Continued)

Table of Contents

	Present value of the defined benefit obligation US\$ (Note 4)	Fair value of the plan assets US\$ (Note 4)	Net defined benefit liability (asset) US\$ (Note 4)
Remeasurement			
Return on plan assets (excluding amounts included in net interest)	\$-	\$1,759	\$1,759
Actuarial loss arising from changes in financial assumptions	1,918	-	1,918
Actuarial gain arising from experience adjustments	(10,631 )	-	(10,631 )
Actuarial loss arising from changes in demographic assumptions	26	-	26
Recognized in other comprehensive income	(8,687 )	1,759	(6,928 )
Contributions from the employer	-	(16,356 )	(16,356 )
Benefits paid from the pension fund	(23,307 )	23,307	-
Benefits paid from the Group	(3,258 )	-	(3,258 )
Exchange differences on foreign plans	6,707	(2,646 )	4,061
Balance at December 31, 2017	\$266,891	\$(146,470)	\$120,421

(concluded)

- 5) The fair value of the plan assets by major categories at each balance sheet date was as follows:

	December 31		US\$
	2016	2017	(Note 4)
	NT\$	NT\$	
Cash	\$2,232,367	\$2,317,764	\$78,197
Debt instruments	1,030,384	691,619	23,334
Equity instruments	1,071,777	1,254,109	42,311
Others	82,839	77,881	2,628
Total	\$4,417,367	\$4,341,373	\$146,470

- 6) Through the defined benefit plans under the Labor Standards Law, the Company and its subsidiaries in Taiwan are exposed to the following risks:

a) Investment risk

The plan assets are invested in equity and debt securities, bank deposits, etc. The investment is conducted at the discretion of the Bureau or under the mandated management. However, in accordance with relevant regulations, the return generated by plan assets should not be below the interest rate for a 2-year time deposit with local banks.

b) Interest risk

A decrease in the government bond interest rate will increase the present value of the defined benefit obligation; however, this will be partially offset by an increase in the return on the plan's debt investments.

c) Salary risk

The present value of the defined benefit obligation is calculated by reference to the future salaries of plan participants. As such, an increase in the salary of the plan participants will increase the present value of the defined benefit obligation.

7) The management of ASE Korea is responsible for the administration of the fund and determination of the investment strategies according to related local regulations. ASE Korea is responsible for the shortfall between the fund and the defined benefit obligation. The plan assets are invested in the certificates of deposits and debt instruments with well credit rating.

8) The present value of the defined benefit obligation and the related current service cost and past service cost were measured using the Projected Unit Credit Method. Except the pension plans for executive managers, the key assumptions used for the actuarial valuations were as follow:

	<b>December 31</b>	
	2016	2017
Discount rates	0.06%-3.58%	0.06%-3.85%
Expected rates of salary increase	2.00%-4.42%	2.00%-4.42%

Significant actuarial assumptions for the determination of the defined obligation excluding those for executive managers are discount rates and expected rates of salary increase. The sensitivity analysis below has been determined based on reasonably possible changes of the respective assumptions occurring at each balance sheet date, while holding all other assumptions constant.



Table of Contents

	December 31		
	2016	2017	
	NT\$	NT\$	US\$ (Note 4)
Discount Rate			
0.5% higher	\$(464,647)	\$(455,158)	\$(15,356)
0.5% lower	\$508,862	\$461,891	\$15,583
Expected rates of salary increase			
0.5% higher	\$500,051	\$453,792	\$15,310
0.5% lower	\$(452,956)	\$(444,493)	\$(14,996)

The sensitivity analysis presented above may not be representative of the actual change in the defined benefit obligation as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

## 9) Maturity analysis of undiscounted pension benefit

	December 31		
	2016	2017	
	NT\$	NT\$	US\$ (Note 4)
No later than 1 year	\$292,100	\$291,152	\$9,823
Later than 1 year and not later than 5 years	1,673,549	1,551,496	52,345
Later than 5 years	17,129,585	16,507,747	556,941
	\$19,095,234	\$18,350,395	\$619,109

The Group expected to make contributions of NT\$521,324 thousand and NT\$272,911 thousand (US\$9,208 thousand) to the defined benefit plans in the next year starting from January 1, 2017 and 2018, respectively.

As of December 31, 2016 and 2017, the average duration of the defined benefit obligation excluding those for executive managers of the Group was 8 to 15 years and 8 to 14 years, respectively.

## 23. EQUITY

## a. Share capital

Ordinary shares

	<b>December 31,  2016</b>	<b>December 31,  2017</b>
Numbers of shares authorized (in thousands)	10,000,000	10,000,000
Numbers of shares reserved (in thousands) Employee share options	800,000	800,000
Number of shares issued and fully paid (in thousands)	7,946,184	8,738,079

F-60

Table of Contents

	<b>December 31, December 31,</b>		
	<b>2016</b>	<b>2017</b>	
	NT\$	NT\$	US\$ (Note 4)
Share capital authorized	\$ 100,000,000	\$ 100,000,000	\$ 3,373,819
Share capital reserved			
Employee share options	\$ 8,000,000	\$ 8,000,000	\$ 269,906
Share capital issued	\$ 79,568,040	\$ 87,380,787	\$ 2,948,070

The holders of issued ordinary shares with a par value at \$10 per share are entitled the right to vote and receive dividends, except the shares held by the Group's subsidiaries which are not entitled the right to vote. As of December 31, 2016 and 2017, there were both 500,000 thousand ordinary shares included in the authorized shares that were not yet required to complete the share registration process.

In December 2016, the board of directors approved the issuance of 300,000 thousand ordinary shares for cash capital increase at NT\$34.3 per share. The aforementioned cash capital increase has been completed and the Company has completed the registration formalities in March 2017.

As disclosed in Note 20, there were 424,258 thousand ordinary shares were issued under the conversion of Bonds in 2017. The record dates of 101,164 thousand and 323,094 thousand ordinary shares were July 13, 2017 and October 13, 2017, respectively. The Company has completed the registration formalities.

American Depositary Receipts

The Company issued ADSs and each ADS represents five ordinary shares. As of December 31, 2016 and 2017, 125,518 thousand and 115,261 thousand ADSs were outstanding and represented approximately 627,590 thousand and 576,305 thousand ordinary shares of the Company, respectively.

b.

Capital surplus

December 31	
2016	2017
NT\$	NT\$

US\$ (Note  
4)

May be used to offset a deficit,

distributed as cash dividends,

or transferred to share capital (1)

Arising from issuance of ordinary shares	\$5,844,397	\$21,553,853	\$727,188
Arising from conversion of bond payable	-	1,930,066	65,117
Arising from the difference between consideration received and the carrying amount of the subsidiaries' net assets during actual disposal or acquisition	7,176,958	7,176,958	242,137

May be used to offset a deficit only

Arising from changes in percentage of ownership interest in subsidiaries (2)	6,134,228	6,084,895	205,293
Arising from treasury share transactions	950,368	1,151,345	38,844
Arising from exercised employee share options	630,411	1,089,178	36,747
Arising from expired employee share options (Note 27)	3,626	223,454	7,539
Arising from share of changes in capital surplus of associates	82,243	83,733	2,825

May not be used for any purpose

Arising from employee share options	1,230,247	960,888	32,419
Arising from equity component of convertible bonds	214,022	214,022	7,221
Others (3)	-	155,936	5,261
	\$22,266,500	\$40,624,328	\$1,370,591

F-61



Table of Contents

Such capital surplus may be used to offset a deficit; in addition, when the Company has no deficit, such capital surplus may be distributed as cash dividends or transferred to share capital (limited to a certain percentage of the Company's capital surplus and once a year).

Such capital surplus arises from the effect of changes in ownership interest in a subsidiary resulted from equity transactions other than actual disposal or acquisition, or from changes in capital surplus of subsidiaries accounted for using the equity method.

Such capital surplus arises from the excess of related carrying amount of related accounts over the par value and the Company has not completed registration formalities when the convertible bonds were converted into ordinary shares and employee share options were exercised.

c. Retained earnings and dividend policy

In accordance with the amendments to the Company Act in May 2015, the recipients of dividends and bonuses are limited to shareholders and do not include employees. The consequential amendments to the Company's Articles of Incorporation was resolved at the Company's annual shareholders' meeting. For information about the accrual basis of the employees' compensation and remuneration to directors and the actual appropriations, please refer to employee benefits expense under profit before income tax in Note 24(g).

The amended Articles of Incorporation of ASE Inc. (the "Articles") in June 2016 provides that annual net income shall be distributed in the following order:

- 1) Replenishment of deficits;
- 2) 10.0% as legal reserve;
- 3) Special reserve appropriated or reversed in accordance with laws or regulations set forth by the authorities concerned;
- 4) Addition or deduction of realized gains or losses on equity instruments at fair value through other comprehensive income;

The Company is currently in the mature growth stage. To meet the capital needs for business development now and in the future and satisfy the shareholders' demand for cash inflows, the Company shall use residual dividend policy to

distribute dividends, of which the cash dividend is not lower than 30% of the total dividend distribution, with the remainder to be distributed in stock. A distribution plan is also to be made by the board of directors and passed for resolution in the shareholders' meeting.

F-62

Table of Contents

Appropriation of earnings to legal reserve shall be made until the legal reserve equals the Company's share capital. Legal reserve may be used to offset deficits. If the Company has no deficit and the legal reserve has exceeded 25% of the Company's share capital, the excess may be transferred to capital or distributed in cash.

Under Rule No. 1010012865 and Rule No. 1010047490 issued by the FSC and the directive titled "Questions and Answers for Special Reserves Appropriated Following Adoption of IFRSs", the Company should appropriate to or reverse a special reserve.

Expect for non-ROC resident shareholders, all shareholders receiving the dividends are allowed a tax credit equal to their proportionate share of the income tax paid by the Company.

The appropriations of earnings for 2015 and 2016 resolved at the Company's annual shareholders' meetings in June 2016 and June 2017, respectively, were as follows:

	Appropriation of Earnings		Dividends Per Share	
	For Year 2015	For Year 2016	For Year 2015	For Year 2016
	NT\$	NT\$	NT\$ (in dollars)	NT\$ (in dollars)
Legal reserve	\$1,947,887	\$2,168,034		
Cash dividends	12,476,779	11,415,198	\$1.60	\$1.40
	\$14,424,666	\$13,583,232		

d.

Other equity

1) Exchange differences on translating foreign operations

	For the Year Ended December 31			US\$ (Note 4)
	2015	2016	2017	
	NT\$	NT\$	NT\$	
Balance at January 1	\$4,540,862	\$4,492,671	\$(1,643,623)	\$(55,453 )

Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

Exchange differences arising on translating foreign operations	11,459	(5,843,856)	(4,952,815)	(167,099)
Share of exchange difference of associates and joint venture accounted for using the equity method	(59,650 )	(292,438 )	(137,221 )	(4,630 )
Balance at December 31	\$4,492,671	\$(1,643,623)	\$(6,733,659)	\$(227,182)

F-63

Table of Contents

## 2) Unrealized gain (loss) on available-for-sale financial assets

	For the Year Ended December 31			US\$ (Note 4)
	2015	2016	2017	
	NT\$	NT\$	NT\$	
Balance at January 1	\$526,778	\$588,119	\$(197,314)	\$(6,657)
Unrealized gain (loss) arising on revaluation of available-for-sale financial assets	(4,304 )	(257,240)	169,585	5,721
Cumulative loss reclassified to profit or loss on impairment of available-for-sale financial assets	-	-	50,206	1,694
Cumulative loss (gain) reclassified to profit or loss on disposal of available-for-sale financial assets	10,827	7,512	(1,517 )	(51 )
Share of unrealized gain (loss) on available-for-sale financial assets of associates and joint venture accounted for using the equity method	54,818	(535,705)	401,610	13,550
Balance at December 31	\$588,119	\$(197,314)	\$422,570	\$14,257

## e. Treasury shares (in thousand shares)

	Balance at January 1	Addition	Decrease	Balance at December 31
2015				
Shares held by subsidiaries	145,883	-	-	145,883
Shares reserved for bonds conversion	-	120,000	-	120,000
	145,883	120,000	-	265,883

Table of Contents

	Balance at January 1	Addition	Decrease	Balance at December 31
2016				
Shares held by subsidiaries	145,883	-	-	145,883
Shares reserved for bonds conversion	120,000	-	-	120,000
	265,883	-	-	265,883
2017				
Shares held by subsidiaries	145,883	-	-	145,883
Shares reserved for bonds conversion	120,000	-	-	120,000
	265,883	-	-	265,883

In February 2015, the board of directors approved to repurchase up to 120,000 thousand of the Company's ordinary shares which were reserved for equity conversion of convertible overseas bonds. The Company has completed the repurchase during March 2015 and the shares repurchased accounted for 1.53% of the Company's total issued shares. The average repurchase price was NT\$44.45 per share.

The Company's shares held by its subsidiaries at each balance sheet date were as follows:

	<b>Shares Held By Subsidiaries</b> (in thousand shares)	Carrying amount NT\$	Carrying amount US\$ (Note 4)	Fair Value NT\$	Fair Value US\$ (Note 4)
December 31, 2016					
ASE Test	88,200	\$ 1,380,721		\$2,915,026	
J&R Holding	46,704	381,709		1,543,559	
ASE Test, Inc.	10,979	196,677		362,849	
	145,883	\$ 1,959,107		\$4,821,434	

December 31, 2017

ASE Test	88,200	\$1,380,721	\$46,583	\$3,364,848	\$113,524
J&R Holding	46,704	381,709	12,878	1,781,749	60,113
ASE Test, Inc.	10,979	196,677	6,636	418,840	14,131
	145,883	\$1,959,107	\$66,097	\$5,565,437	\$187,768

Fair values of the Company's shares held by subsidiaries are based on the closing price from an available published price quotation, which is a Level 1 input in terms of IFRS 13, at the balance sheet dates.

F-65

Table of Contents

The Company issued ordinary shares in connection with its merger with its subsidiaries. The shares held by its subsidiaries were reclassified from investments accounted for using the equity method to treasury shares on the proportion owned by the Company.

Under the Securities and Exchange Act of the ROC, the Company shall neither pledge treasury shares nor exercise shareholders' rights on these shares, such as rights to dividends and voting. The subsidiaries holding treasury shares, however, retain shareholders' rights except the rights to participate in any share issuance for cash and voting.

## f. Non-controlling interests

	For the Year Ended December 31			
	<b>2016</b>			
	2015	<b>(Retrospectively Adjusted)</b>	2017	
	NT\$	NT\$	NT\$	US\$ (Note 4)
Balance at January 1	\$8,209,860	\$ 11,492,545	\$ 12,000,551	\$ 404,877
Attributable to Non-controlling interests:				
Share of profit for the year (Note 28)	968,567	1,253,438	1,677,941	56,611
Exchange difference on translating foreign operations	(74,968 )	(601,787 )	(334,920 )	(11,300 )
Unrealized gain on available-for-sale financial assets	3,928	1,129	5,763	194

F-66



Table of Contents

	For the Year Ended December 31			
	2015	<b>(Retrospectively Adjusted)</b>		2017
	NT\$	NT\$	NT\$	US\$ (Note 4)
Defined benefit plan actuarial gains (losses)	\$(3,440 )	\$ 8,846	\$(13,724 )	\$(463 )
Non-controlling interests arising from acquisition of subsidiaries (Note 28)	-	42,857	-	-
Partial disposal of subsidiaries (Note 30)	1,712,836	26,436	(3,055 )	(103 )
Repurchase of outstanding ordinary shares of subsidiaries (Note 30)	-	(912,886 )	-	-
Spin-off of subsidiaries	3,006	-	-	-
Non-controlling interest relating to outstanding vested employee share options held by the employees of subsidiaries	904,904	927,823	263,213	8,880
Non-controlling interest relating to outstanding expired employee share options	-	-	(159,200 )	(5,371 )
Cash dividends to non-controlling interests	(232,148 )	(237,850 )	(246,440 )	(8,314 )
Balance at December 31 (Concluded)	\$ 11,492,545	\$ 12,000,551	\$ 13,190,129	\$ 445,011

**24.****PROFIT BEFORE INCOME TAX**

## a. Other operating income and expenses, net

	For the Year Ended December 31			
	2015	2016	2017	US\$ (Note 4)
	NT\$	NT\$	NT\$	
Rental income	\$60,230	\$51,607	\$131,570	\$4,439
Gain (loss) on disposal of property, plant and equipment and other assets	(127,111)	(127,159)	367,110	12,386
Impairment loss on property, plant and equipment and goodwill	(258,129)	(888,231)	(714,675)	(24,112)
Loss on damages and claims	(116,445)	(12,778 )	(85,585 )	(2,888 )
Others	189,926	176,281	410,136	13,837
	\$(251,529)	\$(800,280)	\$108,556	\$3,662

## b. Other income

	For the Year Ended December 31			US\$ (Note 4)
	2015	2016	2017	
	NT\$	NT\$	NT\$	
Government subsidy	\$176,721	\$332,758	\$341,844	\$11,533
Interest income	242,084	230,067	306,871	10,353
Dividends income	396,973	26,411	59,039	1,992
	\$815,778	\$589,236	\$707,754	\$23,878

## c. Other gains and losses

	For the Year Ended December 31			US\$ (Note 4)
	2015	2016	2017	
	NT\$	NT\$	NT\$	
Gain on disposal of subsidiaries (Note 29)	\$-	\$-	\$5,589,457	\$188,578
Net gain (loss) arising on financial instruments held for trading	1,657,093	\$224,446	(3,111,253)	(104,968)
Net gain on financial assets designated as at FVTPL	815,742	223,113	327,351	11,044
Foreign exchange gain or loss, net	(713,213 )	1,928,384	3,502,586	118,171
Impairment loss on financial assets	-	(91,886 )	(50,206 )	(1,694 )
Others	(10,827 )	(7,513 )	1,518	52
	\$1,748,795	\$2,276,544	\$6,259,453	\$211,183

F-67

Table of Contents

d.	Finance costs			
	For the Year Ended December 31			
	2015	2016	2017	US\$
	NT\$	NT\$	NT\$	(Note 4)
Total interest expense for financial liabilities measured at amortized cost	\$2,514,208	\$2,510,197	\$2,016,298	\$68,026
Less: Amounts included in the cost of qualifying assets				
Inventories related to real estate business	(197,287 )	(238,469 )	(190,137 )	(6,415 )
Property, plant and equipment	(48,135 )	(54,191 )	(51,262 )	(1,729 )
Investment property	-	-	(13 )	-
	2,268,786	2,217,537	1,774,886	59,882
Other finance costs	43,357	43,538	24,608	830
	\$2,312,143	\$2,261,075	\$1,799,494	\$60,712

Information relating to the capitalized borrowing costs was as follows:

	For the Year Ended		
	December 31		
	2015	2016	2017
Annual interest capitalization rates			
Inventories related to real estate business(%)	4.35-6.77	4.35-6.00	4.35-5.39
Property, plant and equipment(%)	0.75-6.15	1.15-4.42	1.26-5.49
Investment properties (%)	-	-	1.26-1.97

e.	Depreciation and amortization			
	For the Year Ended December 31			
	2016			
	2015	(Retrospectively Adjusted)	2017	US\$
NT\$	NT\$	NT\$	(Note 4)	
Property, plant and equipment	\$28,938,770	\$ 28,961,614	\$28,625,287	\$965,766
Investment properties	-	-	122,231	4,124
Intangible assets	579,894	508,823	457,666	15,441

Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

Total	\$29,518,664	\$ 29,470,437	\$29,205,184	\$ 985,331
Summary of depreciation by function				
Operating costs	\$27,023,957	\$ 26,948,106	\$26,731,714	\$ 901,880
Operating expenses	1,914,813	2,013,508	2,015,804	68,010
	\$28,938,770	\$ 28,961,614	\$28,747,518	\$ 969,890

(Continued)

F-68

Table of Contents

	For the Year Ended December 31			
	<b>2016</b>			
	2015	(Retrospectively Adjusted)	2017	
	NT\$	NT\$	NT\$	US\$ (Note 4)
Summary of amortization by function				
Operating costs	\$ 124,235	\$ 152,987	\$ 140,175	\$ 4,729
Operating expenses	455,659	355,836	317,491	10,712
	\$ 579,894	\$ 508,823	\$ 457,666	\$ 15,441

(Concluded)

## f. Operating expenses directly related to investment properties

	For the Year Ended December 31			
	2015	2016	2017	
	NT\$	NT\$	NT\$	US\$ (Note 4)
Direct operating expenses of investment properties that generated rental income	\$-	\$-	\$ 465,458	\$ 15,704

## g. Employee benefits expense

	For the Year Ended December 31			
	2015	2016	2017	
	NT\$	NT\$	NT\$	US\$ (Note 4)
Post-employment benefits				
Defined contribution plans	\$ 2,324,737	\$ 2,356,416	\$ 2,340,826	\$ 78,975
Defined benefit plans	413,490	394,741	266,267	8,983
	2,738,227	2,751,157	2,607,093	87,958
Equity-settled share-based payments	133,496	470,788	438,765	14,803
Other employee benefits	47,883,464	49,525,940	51,043,198	1,722,105
	\$ 50,755,187	\$ 52,747,885	\$ 54,089,056	\$ 1,824,866

Summary of employee benefits expense by function

Operating costs	\$34,720,359	\$35,588,529	\$35,978,403	\$1,213,846
Operating expenses	16,034,828	17,159,356	18,110,653	611,020
	\$50,755,187	\$52,747,885	\$54,089,056	\$1,824,866

h. Employees' compensation and the remuneration to directors

To be in compliance with the Company Act as amended in May 2015, the amended Articles of Incorporation of the Company, which has been approved in the shareholders' meeting in June 2016, stipulates to distribute employees' compensation and remuneration to directors at the rates in 5.25%-8.25% and no higher than 0.75%, respectively, of net profit before income tax, employees' compensation and remuneration to directors. For the years ended December 31, 2015, 2016 and 2017, the employees' compensation and the remuneration to directors were accrued based on 8.25% and 0.75% of net profit before income tax, employees' compensation and remuneration to directors, respectively, and were as follows.

Table of Contents

	For the Year Ended December 31			US\$ (Note 4)
	2015	2016	2017	
	NT\$	NT\$	NT\$	
Employees' compensation	\$2,033,500	\$2,147,323	\$2,291,140	\$77,299
Remuneration to directors	184,500	195,211	208,285	7,027

If there is any change in the proposed amounts after the consolidated financial statements authorized for issue, the differences are recorded as a change in accounting estimate.

The appropriations of employees' compensation (settled by cash) and remuneration to directors for 2015 and 2016 resolved by the board of directors in April 2016 and in March 2017, respectively, and the amounts recognized in 2015 and 2016 consolidated financial statements were as follows.

	For Year 2015		For Year 2016	
	Employees' compensation NT\$	Remuneration to directors NT\$	Employees' compensation NT\$	Remuneration to directors NT\$
Resolved by the board of directors	\$2,033,800	\$ 140,000	\$2,151,900	\$ 148,000
Recognized in the consolidated financial statements	\$2,033,500	\$ 184,500	\$2,147,323	\$ 195,211

The differences between the resolved amounts of the employees' compensation and the remuneration to directors and the accrued amounts reflected in the consolidated financial statements for the years ended December 31, 2015 and 2016 were deemed changes in estimates. The difference was NT\$44,200 thousand and NT\$42,634 thousand (US\$1,438 thousand) and had been adjusted in net profit for the years ended December 31, 2016 and 2017, respectively.

## 25.

## INCOME TAX

## a. Income tax recognized in profit or loss

The major components of income tax were as follows:

For the Year Ended December 31		
2015	2016	2017

	NT\$	NT\$	NT\$	US\$ (Note 4)
Current income tax				
In respect of the current year	\$4,029,076	\$4,177,900	\$4,979,766	\$168,008
Income tax on unappropriated earnings	187,654	829,345	1,076,353	36,314
Changes in estimate for prior years	(20,719 )	28,160	(88,162 )	(2,974 )
	4,196,011	5,035,405	5,967,957	201,348

F-70



Table of Contents

	For the Year Ended December 31			US\$ (Note 4)
	2015	2016	2017	
	NT\$	NT\$	NT\$	
Deferred income tax				
In respect of the current year	\$ 190,829	\$ 574,541	\$ 534,472	\$ 18,032
Adjustments attributable to changes in tax rates	3,794	14,184	-	-
Changes in estimate for prior years	(20,890 )	(206,788 )	52,872	1,784
Effect of foreign currency exchange differences	(58,671 )	(26,498 )	(31,698 )	(1,070 )
	115,062	355,439	555,646	18,746
Income tax recognized in profit or loss	\$ 4,311,073	\$ 5,390,844	\$ 6,523,603	\$ 220,094

A reconciliation of income tax expense calculated at the statutory rates and income tax expense recognized in profit or loss was as follows:

	For the Year Ended December 31			US\$ (Note 4)
	2015	2016	2017	
	NT\$	(Retrospectively Adjusted) NT\$	NT\$	
Profit before income tax	\$ 25,011,788	\$ 27,968,705	\$ 31,020,663	\$ 1,046,581
Income tax expense calculated at the statutory rates	\$ 6,307,148	\$ 8,634,187	\$ 10,890,498	\$ 367,426
Nontaxable expense in determining taxable income	160,530	(34,954 )	483,715	16,319
Tax-exempt income	(537,987 )	(700,274 )	(623,566 )	(21,038 )
Additional income tax on unappropriated earnings	338,142	829,345	1,076,353	36,314
Loss carry-forward and income tax credits currently used	(1,286,705 )	(898,700 )	(1,124,043 )	(37,923 )
Remeasurement of deferred income tax assets, net	(688,584 )	(2,797,673 )	(4,131,473 )	(139,389 )
Changes in estimate for prior years	(20,719 )	28,160	(88,162 )	(2,974 )
Withholding tax	39,248	81,543	40,281	1,359
Land value increment tax	-	249,210	-	-
Income tax expense recognized in profit or loss	\$ 4,311,073	\$ 5,390,844	\$ 6,523,603	\$ 220,094

For the years ended December 31, 2015, 2016 and 2017, the Group applied a tax rate of 17% for resident entities subject to the Income Tax Law of the ROC; for the subsidiaries located in China, the applied tax rate was 25%; and for other jurisdictions, the Group measures taxes by using the applicable tax rate for each individual jurisdiction.

In February 2018, it was announced by the President that the Income Tax Law of the ROC was amended and, starting from 2018, the corporate income tax rate will be adjusted from 17% to 20%. In addition, the tax rate applicable to 2018 unappropriated earnings will be reduced from 10% to 5%. Deferred tax assets and deferred tax liabilities recognized as at December 31, 2017 are expected to be adjusted and would increase by NT\$201,965 thousand (US\$6,814 thousand) and NT\$788,556 thousand (US\$26,604 thousand), respectively, in 2018.

F-71

Table of Contents

As the status of 2018 appropriations of earnings is uncertain, the potential income tax consequences of 2017 unappropriated earnings are not reliably determinable.

b. Income tax recognized directly in equity

	For the Year Ended December 31			US\$ (Note 4)
	2015	2016	2017	
	NT\$	NT\$	NT\$	
Deferred income tax				
Related to employee share options	\$(33)	\$(204)	\$262	\$ 9

c. Income tax recognized in other comprehensive income

	For the Year Ended December 31			US\$ (Note 4)
	2015	2016	2017	
	NT\$	NT\$	NT\$	
Deferred income tax				
Related to remeasurement of defined benefit plans	\$11,002	\$73,637	\$(51,217)	\$(1,728)

d. Current tax assets and liabilities

	December 31		US\$ (Note 4)
	2016	2017	
	NT\$	NT\$	
Current tax assets			
Tax refund receivable	\$260,559	\$28,458	\$960
Prepaid income tax	211,193	232,084	7,830
	\$471,752	\$260,542	\$8,790
Current tax liabilities			
Income tax payable	\$6,846,350	\$7,619,328	\$257,062

## e. Deferred tax assets and liabilities

The Group offset certain deferred tax assets and deferred tax liabilities which met the offset criteria.

The movements of deferred tax assets and deferred tax liabilities were as follows:

	Balance at January 1	Recognized in Profit or Loss	Recognized in Other Comprehensive Income	Recognized in Equity	Exchange Differences	Acquisitions through business combinations	Balance at December 31
	NT\$	NT\$	NT\$	NT\$	NT\$	NT\$	NT\$
Year ended December 31, 2015							
Temporary differences							
Property, plant and equipment	\$(2,431,855)	\$(1,083,273)	\$ -	\$ -	\$ 10,670	\$ -	\$(3,504,458)
Defined benefit obligation	796,642	20,398	11,002	-	17,897	-	845,939
FVTPL financial instruments	(170,059 )	(62,152 )	-	-	13	-	(232,198 )
Others	1,166,297	229,799	-	(33 )	(11,076 )	-	1,384,987
	(638,975 )	(895,228 )	11,002	(33 )	17,504	-	(1,505,730)
Loss carry-forward	519,898	812,217	-	-	(8,538 )	-	1,323,577
Investment credits	452,331	(32,904 )	-	-	(68,308 )	-	351,119
Others	(853 )	853	-	-	-	-	-
	\$ 332,401	\$(115,062 )	\$ 11,002	\$ (33 )	\$(59,342 )	\$ -	\$ 168,966
Year ended December 31, 2016							
Temporary differences							
Property, plant and equipment	\$(3,504,458)	\$(182,291 )	\$ -	\$ -	\$(72,098 )	\$ -	\$(3,758,847)
Defined benefit obligation	845,939	(48,601 )	73,637	-	2,509	-	873,484
FVTPL financial instruments	(232,198 )	212,737	-	-	(1,902 )	-	(21,363 )
Others	1,384,987	(283,179 )	-	(204 )	(21,780 )	-	1,079,824
	(1,505,730)	(301,334 )	73,637	(204 )	(93,271 )	-	(1,826,902)
Loss carry-forward	1,323,577	(110,967 )	-	-	(91,008 )	2,939	1,124,541
Investment credits	351,119	56,862	-	-	(25,245 )	-	382,736

\$ 168,966    \$(355,439 )    \$ 73,637    \$ (204 )    \$(209,524 )    \$ 2,939    \$(319,625 )

Year ended December  
31, 2017

Temporary differences

Property, plant and equipment	\$(3,758,847)	\$(101,576 )	\$ -	\$ -	\$(18,643 )	\$ -	\$(3,879,066)
Defined benefit obligation	873,484	(26,736 )	(51,217 )	-	(15,291 )	-	780,240
FVTPL financial instruments	(21,363 )	(86,342 )	-	-	2,802	-	(104,903 )
Others	1,079,824	(22,748 )	-	262	(28,929 )	-	1,028,409
	(1,826,902)	(237,402 )	(51,217 )	262	(60,061 )	-	(2,175,320)
Loss carry-forward	1,124,541	(456,246 )	-	-	13,146	-	681,441
Investment credits	382,736	138,002	-	-	13,475	-	534,213
	\$(319,625 )	\$(555,646 )	\$(51,217 )	\$ 262	\$(33,440 )	\$ -	\$(959,666 )

F-72

Table of Contents

	Balance at January 1	Recognized in Profit or Loss	Recognized in Other Comprehensive Income	Recognized in Equity	Exchange Differences	Acquisitions through business combinations	Balance at December 31
	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)
Year ended December 31, 2017							
Temporary differences							
Property, plant and equipment	\$(126,817)	\$(3,427 )	\$ -	\$ -	\$(629 )	\$ -	\$(130,873)
Defined benefit obligation	29,470	(902 )	(1,728 )	-	(516 )	-	26,324
FVTPL financial instruments	(721 )	(2,913 )	-	-	94	-	(3,540 )
Others	36,431	(767 )	-	9	(976 )	-	34,697
	(61,637 )	(8,009 )	(1,728 )	9	(2,027 )	-	(73,392 )
Loss carry-forward	37,940	(15,393 )	-	-	444	-	22,991
Investment credits	12,913	4,656	-	-	454	-	18,023
	\$(10,784 )	\$(18,746 )	\$(1,728 )	\$ 9	\$(1,129 )	\$ -	\$(32,378 )

## f. Items for which no deferred tax assets have been recognized

Unrecognized deferred tax assets related to loss carry-forward, investment credits and deductible temporary differences were summarized as follows:

	December 31		US\$
	2016	2017	(Note 4)
	NT\$	NT\$	
Loss carry-forward	\$652,593	\$542,054	\$18,288
Investment credits	280,068	-	-
Deductible temporary differences	904,441	712,141	24,026
	\$1,837,102	\$1,254,195	\$42,314

The unrecognized loss carry-forward will expire through 2030 and the unrecognized investment credits will expire through 2018.

F-73

Table of Contents

- g. Information about unused loss carry-forward, unused investment credits, tax-exemption and other tax relief

As of December 31, 2017, the unused loss carry-forward comprised of:

Year of Expiry	NT\$	US\$ (Note 4)
2018	\$230,656	\$7,782
2019	34,981	1,180
2020	615,327	20,760
2021	164,377	5,546
2022 and thereafter	178,154	6,011
	\$1,223,495	\$41,279

As of December 31, 2017, unused investment credits comprised of:

Tax Credit Source	Remaining Creditable Amount		Expiry Year
	NT\$	US\$ (Note 4)	
Purchase of machinery and equipment	\$518,790	\$17,503	2018
Others	15,423	520	2022 and thereafter
	\$534,213	\$18,023	

As of December 31, 2017, profits attributable to the following expansion projects were exempted from income tax for a 5-year period:

	<b>Tax-exemption Period</b>
Construction and expansion of 2007 by the Company	2016.01-2020.12
Construction and expansion of 2008 by the Company	2014.01-2018.12
Construction and expansion of 2008 by ASE Test Inc.	2014.01-2018.12
Construction and expansion of 2009 by ASE Test Inc.	2018.01-2022.12
Expansion of 2008 by ASE Electronics Inc.	2016.01-2020.12



Some China subsidiaries qualified as high technology enterprises were entitled to a reduced income tax rate of 15% and were eligible to deduct certain times of research and development expenses from their taxable income.

h. Unrecognized deferred tax liabilities associated with investments

As of December 31, 2016 and 2017, the taxable temporary differences associated with the investments in subsidiaries for which no deferred tax liabilities have been recognized were NT\$14,417,873 thousand and NT\$16,401,422 thousand (US\$553,354 thousand), respectively.

i. Integrated income tax

As of December 31, 2016 and 2017, unappropriated earnings were all generated on and after January 1, 1998. As of December 31, 2016 and 2017, the balance of the Imputation Credit Account was NT\$3,328,374 thousand and NT\$4,003,283 thousand (US\$135,064 thousand), respectively.

The creditable ratio for the distribution of earnings of 2016 was 10.01%. Since the amended Income Tax Act published in February 2018 abolished the imputation tax system, no creditable ratio for distribution of earnings in 2018 is expected.

Table of Contents

## j. Income tax assessments

Income tax returns of ASE Inc. have been examined by authorities in 2012, 2014 and 2015 and its ROC subsidiaries have been examined by authorities through 2013 to 2015. ASE Inc. disagreed with the result of examinations relating to its income tax returns for 2014 and 2015 and appealed to the tax authorities. The related income tax expenses in the years resulting from the examinations have been accrued in respective tax years or in the year of the settlement.

## 26. EARNINGS PER SHARE

The earnings and weighted average number of ordinary shares outstanding in the computation of earnings per share were as follows:

Net profit for the year

	For the Year Ended December 31			
	2015	2016	2017	US\$ (Note 4)
	NT\$	NT\$	NT\$	
Profit for the year attributable to owners of the Company	\$ 19,732,148	\$ 21,324,423	\$ 22,819,119	\$ 769,876
Effect of potentially dilutive ordinary shares:				
Employee share options issued by subsidiaries	-	(374,359 )	(813,627 )	(27,450 )
Investments in associates	(210,126 )	(494,388 )	(367,687 )	(12,405 )
Convertible bonds	901,187	(1,165,506 )	93,781	3,164
Earnings used in the computation of diluted earnings per share	\$ 20,423,209	\$ 19,290,170	\$ 21,731,586	\$ 733,185

Weighted average number of ordinary shares outstanding (in thousand shares):

For the Year Ended December 31  
2015      2016      2017

Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

Weighted average number of ordinary shares in computation of basic earnings per share	7,652,773	7,662,870	8,160,887
Effect of potentially dilutive ordinary shares:			
Convertible bonds	455,671	515,295	124,911
Employee share options	86,994	59,218	39,868
Employees' compensation	54,626	46,746	43,574
Weighted average number of ordinary shares in computation of diluted earnings per share	8,250,064	8,284,129	8,369,240

For purposes of the ADS calculation, the denominator represents the above-mentioned weighted average outstanding shares divided by five (one ADS represents five ordinary shares). The numerator was the same.

F-75

Table of Contents

The Group is able to settle the employees' compensation by cash or shares. The Group assumed that the entire amount of the compensation would be settled in shares and the resulting potential shares were included in the weighted average number of ordinary shares outstanding used in the computation of diluted earnings per share if the effect is dilutive. Such dilutive effect of the potential shares was included in the computation of diluted earnings per share until the shareholders approve the number of shares to be distributed to employees at their meeting in the following year.

The third unsecured convertible overseas bonds issued by the Company were anti-dilutive for the year ended December 31, 2017 and were excluded from the computation of diluted earnings per share for the same period.

## 27. SHARE-BASED PAYMENT ARRANGEMENTS

## a. Employee share option plans of the Company and its subsidiaries

In order to attract, retain and reward employees, ASE Inc. has five employee share option plans for full-time employees of the Group. Each share option represents the right to purchase one ordinary share of ASE Inc. when exercised. Under the terms of the plans, share options are granted at an exercise price equal to or not less than the closing price of the ordinary shares listed on the TSE at the grant date. The option rights of these plans are valid for 10 years, non-transferable and exercisable at certain percentages subsequent to the second anniversary of the grant date. For any subsequent changes in the Company's capital structure, the exercise price is accordingly adjusted.

ASE Inc. Option Plans

Information about share options was as follows:

	For the Year Ended December 31					
	2015	2016		2017		
	Number of Options (In Thousands)	Weighted Average Exercise Price Per Share (NT\$)	Number of Options (In Thousands)	Weighted Average Exercise Price Per Share (NT\$)	Number of Options (In Thousands)	Weighted Average Exercise Price Per Share (NT\$)
Balance at January 1	209,745	\$ 20.7	252,607	\$ 26.6	210,795	\$ 27.3
Options granted	94,270	36.5	-	-	-	-

Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

Options forfeited	(1,975 )	30.3	(6,056 )	34.6	(5,407 )	36.3
Options expired	(730 )	11.1	-	-	(1,790 )	21.1
Options exercised	(48,703 )	20.6	(35,756 )	20.9	(67,637 )	21.0
Balance at December 31	252,607	26.6	210,795	27.3	135,961	30.2
Options exercisable, end of year	158,103	20.8	123,007	20.8	85,642	26.5
Weighted-average fair value of options granted (NT\$)	<u>\$0.18~7.39</u>		\$-		\$-	

The weighted average share price at exercise dates of share options for the years ended December 31, 2015, 2016 and 2017 was NT\$38.8, NT\$36.2 and NT\$37.6 (US\$1.27), respectively. The option rights of the plan which was granted in 2007, was expired in December 2017, of which shares had not been exercised and, therefore, NT\$47,087 thousand (US\$1,589 thousand) was reclassified from capital surplus arising from exercised employee share options to capital surplus arising from expired employee share options.

Information about the Company's outstanding share options at each balance sheet date was as follows:

Table of Contents

	<b>Range of Exercise Price Per Share (NT\$)</b>	<b>Weighted Average Remaining  Contractual Life (Years)</b>
December 31, 2016		
4 <sup>th</sup> share options	\$ 10.4-22.6	2.5
5 <sup>th</sup> share options	36.5	8.7
December 31, 2017		
4 <sup>th</sup> share options	10.4-22.6	2.5
5 <sup>th</sup> share options	36.5	7.7

ASE Mauritius Inc. Option Plan

ASE Mauritius Inc. has an employee share option plan for full-time employees of the Group which granted 30,000 thousand units in December 2007. Under the terms of the plan, each unit represents the right to purchase one ordinary share of ASE Mauritius Inc. when exercised. The option rights of the plan are valid for 10 years, non-transferable and exercisable at certain percentages subsequent to the second anniversary of the grant date. The option rights of the plan was expired in December 2017, of which shares had not been exercised and, therefore, NT\$159,200 thousand (US\$5,371 thousand) was reclassified from non-controlling interest to capital surplus arising from expired employee share options.

Information about share options was as follows:

	For the Year Ended December 31					
	2015		2016		2017	
	Number of Options (In Thousands)	Exercise Price Per Share (US\$)	Number of Options (In Thousands)	Exercise Price Per Share (US\$)	Number of Options (In Thousands)	Exercise Price Per Share (US\$)
Balance at January 1	28,545	\$ 1.7	28,470	\$ 1.7	28,470	\$ 1.7
Options forfeited	(75)	1.7	-	-	(250)	1.7
Options expired	-	-	-	-	(28,220)	1.7
Balance at December 31	28,470	1.7	28,470	1.7	-	-

Options exercisable, end of year    28,470    1.7    28,470    1.7    -    -

USIE Option Plans

The terms of the plans issued by USIE were the same with those of the Company's option plans.

Information about share options was as follows:

	For the Year Ended December 31					
	2015		2016		2017	
	Number	Weighted	Number	Weighted	Number	Weighted
	of	Average	of	Average	of	Average
	Options	Exercise	Options	Exercise	Options	Exercise
	(In	Price	(In	Price	(In	Price
	Thousands	Per Share	Thousands	Per Share	Thousands	Per Share
		(\$))		(\$))		(\$))
Balance at January 1	34,159	\$ 2.1	29,695	\$ 2.1	25,933	\$ 2.2

(continued)

Table of Contents

	For the Year Ended December 31					
	2015		2016		2017	
	Number of Options (In Thousand)	Weighted Average Exercise Price (US\$)	Number of Options (In Thousand)	Weighted Average Exercise Price (US\$)	Number of Options (In Thousand)	Weighted Average Exercise Price (US\$)
Options forfeited	(84 )	\$ 2.8	-	\$ -	-	\$ -
Options exercised	(4,380 )	1.9	(3,762 )	2.0	(377 )	1.9
Balance at December 31	29,695	2.1	25,933	2.2	25,556	2.2
Options exercisable, end of year	28,106	2.1	25,933	2.2	25,556	2.2

(concluded)

Information about USIE's outstanding share options at each balance sheet date was as follows:

	<b>Range of Exercise Price Per Share</b>	<b>Weighted Average Remaining</b>	<b>Contractual Life (Years)</b>
	(US\$)		
December 31, 2016			
1 <sup>st</sup> share options	\$1.5	4.0	
2 <sup>nd</sup> and 3 <sup>rd</sup> share options	J.4-2.9	3.9	
December 31, 2017			
1 <sup>st</sup> share options	\$1.5	3.0	
2 <sup>nd</sup> and 3 <sup>rd</sup> share options	J.4-2.9	2.9	



In 2016 and 2017, the Group's shareholdings of USIE decreased due to USIE's share options had been exercised. The transaction was accounted for as an equity transaction since the Group did not cease to have control over USIE and, as a result, capital surplus was decreased by NT\$444,320 thousand and NT\$52,388 thousand (US\$1,767 thousand) in 2016 and 2017, respectively.

USISH Option Plans

In November 2015, the shareholders of USISH approved a share option plan for the employees of USISH. Each unit represents the right to purchase one ordinary share of USISH when exercised. The options are valid for 10 years, non-transferable and exercisable at certain percentages subsequent to the second anniversary of the grant date incorporated with certain performance conditions. For any subsequent changes in USISH's capital structure, the exercise price is accordingly adjusted.

Information about share options was as follows:

	For the Year Ended December 31					
	2015		2016		2017	
	Weighted Average Number of Options (In Thousands)	Exercise Price (In CNY)	Weighted Average Number of Options (In Thousands)	Exercise Price (In CNY)	Weighted Average Number of Options (In Thousands)	Exercise Price (In CNY)
Balance at December 31	-	\$ -	26,627	\$ 15.5	24,997	\$ 15.5

(continued)

Table of Contents

	For the Year Ended December 31					
	2015		2016		2017	
	Number of Options (In Thousands)	Weighted Average Exercise Price (CNY)	Number of Options (In Thousands)	Weighted Average Exercise Price (CNY)	Number of Options (In Thousands)	Weighted Average Exercise Price (CNY)
Options granted	26,640	\$ 15.5	-	\$ -	-	\$ -
Options forfeited	(13 )	15.5	(1,630 )	15.5	(2,656 )	15.5
Balance at December 31	26,627	15.5	24,997	15.5	22,341	15.5
Options exercisable, end of year	-	-	-	-	8,896	15.5

(concluded)

As of December 31, 2016 and 2017, the remaining contractual life of the share options was 8.9 years and 7.9 years, respectively.

b. Fair value of share options

Share options granted by the Company and USISH in 2015 were measured using the Hull & White Model (2004) incorporated with Ritchken's Trinomial Tree Model (1995) and the Black-Scholes Option Pricing Model, respectively, and the inputs to the models were as follows:

	ASE Inc.	USISH
Share price at the grant date	NT\$36.5	CNY15.2
Exercise prices	NT\$36.5	CNY15.5
Expected volatility	27.02%	40.33%-45.00%
Expected lives	10 years	10 years
Expected dividend yield	4.00%	0.87%
Risk free interest rates	1.34%	3.06%-3.13%

Expected volatility was based on the historical share price volatility over the past 10 years of ASE Inc. and the comparable companies of USISH, respectively. Under the Hull & White Model (2004) incorporated with Ritchken's Trinomial Tree Model (1995), the Company assumed that employees would exercise the options after vesting date when the share price was 1.88 times the exercise price to allow for the effects of early exercise.

In December 2015, USIE had modified the terms of its option plan granted in 2007 to extend the valid period from 12 years to 13 years, respectively. The incremental fair value of NT\$13,721 thousand were all recognized as employee benefits expense in 2015, since the options were all vested.

Employee benefits expense recognized on employee share options was NT\$133,496 thousand, NT\$470,788 thousand and NT\$354,765 thousand (US\$11,969 thousand) for the years ended December 31, 2015, 2016 and 2017, respectively.

c. New shares reserved for subscription by employees under cash capital increase

In December 2016, the board of directors approved the cash capital increase and, as required under the Company Act of the ROC, simultaneously granted options to employees to purchase 10% of such newly issued shares. The grant of the options was accounted for as employee options, accordingly a share-based compensation, and was measured at fair value in accordance with IFRS 2. The Group recognized employee benefits expense and capital surplus arising from exercised employee share options of NT\$84,000 thousand (US\$2,834 thousand) in full at the grant date (also the vested date), of which 4,836 thousand shares has not been exercised and, therefore, NT\$13,541 thousand (US\$457 thousand) was reclassified from capital surplus arising from exercised employee share options to capital surplus arising from expired employee share options.

Table of Contents

Information about the Company's employee share options related to the aforementioned newly issued shares was as follows:

	<b>Number of Options</b>
	<b>(In Thousand)</b>
Options granted for the year ended December 31, 2017	30,000
Options exercised for the year ended December 31, 2017	25,164
Weighted-average fair value of options granted (NT\$ per share)	\$ 2.80

Fair value was measured using the Black-Scholes Option Pricing Model and the inputs to the model were as follows:

Share price at the grant date	NT\$36.55 per share
Exercise price	NT\$34.30 per share
Expected volatility	27.15%
Expected lives	47 days
Expected dividend yield	-
Risk free interest rate	0.37%

Expected volatility was based on the Company's historical share prices volatility.

28. BUSINESS COMBINATIONS

a. Subsidiary acquired

Principal Activity	Date of Acquisition	Proportion of Voting Equity Interests Acquired	Cash Consideration
			NT\$
TLJ Engaged in information software services	May 3, 2016	60 %	\$ 89,998

In May 2016, the Company's subsidiary, ASE Test, Inc., acquired 60% shareholdings of TLJ with a total consideration determined primarily based on independent professional appraisal reports. NT\$41,739 thousand out of the total consideration was paid to key management personnel and related parties.

b. Assets acquired and liabilities assumed at the date of acquisition

	NT\$
Current assets	\$16,645
Non-current assets	108,486
Current liabilities	(7,599 )
Fair value of identifiable net assets acquired	\$117,532

F-80

Table of Contents

## c. Goodwill recognized on acquisition

	NT\$
Consideration transferred (paid in cash)	\$89,998
Add: Non-controlling interests	42,857
Less: Fair value of identifiable net assets acquired	(117,532)
Goodwill recognized on acquisition	\$15,323

The non-controlling interest recognized at the acquisition date was measured at its fair value.

The goodwill recognized mainly represents the control premium. In addition, the consideration paid for the acquisition effectively included amounts attributed to the benefits of expected revenue growth and future market development of TLJ. These benefits are not recognized separately from goodwill because they do not meet the recognition criteria for identifiable intangible assets.

## d. Net cash outflow on acquisition of subsidiaries

	NT\$
Consideration paid in cash	\$89,998
Less: Cash acquired	(16,561)
	\$73,437

In the second quarter in 2017, the Group has completed the identification of the difference between the cost of the investment and the Group's share of the net fair value of TLJ's identifiable assets and liabilities and therefore, the Company has retrospectively adjusted the comparative consolidated financial statements for prior periods. As of December 31, 2016, the retrospective adjustments are summarized as follows:

	After Retrospectively Adjusted NT\$	Before Retrospectively Adjusted NT\$
December 31, 2016		
Goodwill	\$ 10,490,309	\$ 10,558,878
Other intangible assets	\$ 1,617,261	\$ 1,560,989

For the year ended December 31, 2016

Operating costs	\$ 221,696,922	\$ 221,689,888
Operating expenses	\$ 26,526,815	\$ 26,485,716

The aforementioned retrospective adjustments are accordingly recorded as a decrease of retained earnings of NT\$28,880 thousand and as an increase of non-controlling interests of NT\$16,583 thousand as of December 31, 2016.

29.

#### DISPOSAL OF SUBSIDIARIES

The Group entered into an agreement to dispose of KSDY. The disposal was completed in June 2017 and as a result, the Group lost its control over KSDY.

F-81

Table of Contents

## a. Gain on disposal of subsidiaries

	NT\$	US\$ (Note 4)
Total consideration	\$7,046,464	\$237,735
Net assets disposed of	(1,457,007)	(49,157)
Gain on disposal of KSDY	\$5,589,457	\$188,578

## b. Analysis of assets and liabilities on the date control was lost

	NT\$	US\$ (Note 4)
Current assets		
Cash and cash equivalents	\$29,133	\$983
Inventories related to real estate business	1,427,874	48,174
Net assets disposed of	\$1,457,007	\$49,157

## 30. EQUITY TRANSACTION WITH NON-CONTROLLING INTERESTS

In April 2015, the Group's subsidiary, USIE, sold its shareholdings of 54,000 thousand ordinary shares of USISH amounting to CNY1,992,060 thousand and, as a result, the Group's shareholdings of USISH decreased from 82.1% to 77.2%. The transaction was accounted for as an equity transaction since the Group did not cease to have control over USISH and, as a result, capital surplus was increased by NT\$7,197,510 thousand.

In February 2016, USIE repurchased its own 4,501 thousand outstanding ordinary shares and, as a result, the Group's shareholdings of USIE increased from 96.7% to 98.8%. The transaction was accounted for as an equity transaction since the Group did not cease to have control over USIE and capital surplus was decreased by NT\$1,912,887 thousand in 2016.

In February 2016, the Company disposed 39,603 thousand shares in USI to the Company's subsidiary, UGTW, at NT\$20 per share with a total consideration of NT\$792,064 thousand and, as a result, the Group's shareholdings of USI decreased from 99.0% to 76.5%. The transaction was accounted for as an equity transaction since the Group did not cease to have control over USI and capital surplus was decreased by NT\$20,552 thousand in 2016.



In January 2017, USI completed its cash capital increase of NT\$1,000,000 thousand (US\$33,738 thousand) and the Group's shareholdings of USI increased from 75.2% to 75.7% since the Group did not proportional subscribe for additional new shares. The transaction was accounted for as an equity transaction since the Group did not cease to have control over USI and capital surplus was increased by NT\$3,055 thousand (US\$103 thousand) in 2017.

In January 2018, the shareholders' meeting of the Company's subsidiary, USIE, approved to repurchase its own 3,738,420 outstanding ordinary shares at US\$17.49 per share. In February 2018, the board of directors of USIE resolved February 26, 2018 as the record date for capital reduction and then the repurchased ordinary shares will be subsequently cancelled.

F-82

Table of Contents

## 31. NON-CASH TRANSACTIONS

<sup>a</sup> Except those discussed in Note 11, for the years ended December 31, 2015, 2016 and 2017, the Group entered into the following non-cash investing activities which were not reflected in the consolidated statements of cash flows:

	For the Year Ended December 31			US\$ (Note 4)
	2015	2016	2017	
	NT\$	NT\$	NT\$	
Payments for property, plant and equipment				
Purchase of property, plant and equipment	\$28,280,821	\$27,680,862	\$23,677,682	\$798,842
Increase (decrease) in prepayments for property, plant and equipment (recorded under the line item of other non-current assets)	(267,334 )	(89,337 )	90,560	3,055
(Increase) decrease in payables for property, plant and equipment (recorded under the line item of other payables)	2,314,772	(823,171 )	982,260	33,140

(Continued)

Table of Contents

	For the Year Ended December 31			US\$ (Note 4)
	2015	2016	2017	
	NT\$	NT\$	NT\$	
Capitalized borrowing costs	(48,135 )	(54,191 )	(51,262 )	(1,729 )
	\$30,280,124	\$26,714,163	\$24,699,240	\$833,308
Proceeds from disposal of property, plant and equipment				
Consideration from disposal of property, plant and equipment	\$201,766	\$692,826	\$1,487,334	\$50,180
(Increase) decrease in other receivables	41,265	(22,626 )	876	30
	\$243,031	\$670,200	\$1,488,210	\$50,210
Investment properties				
Purchase of investment properties	\$-	\$-	\$186,535	\$6,293
Capitalized borrowing costs	-	-	(13 )	-
	\$-	\$-	\$186,522	\$6,293
Payments for other intangible assets				
Purchase of other intangible assets	\$491,135	\$675,144	\$277,825	\$9,373
Decrease (increase) in other payables	-	(120,938 )	60,159	2,030
Increase in other non-current liabilities	-	(40,313 )	-	-
	\$491,135	\$513,893	\$337,984	\$11,403
Net cash inflow from disposal of subsidiaries				
Consideration from disposal of subsidiaries	\$-	\$-	\$7,046,464	\$237,735
Increase in other payables	-	-	3,552	120
Cash and cash equivalents disposed of	-	-	(29,133 )	(983 )
	\$-	\$-	\$7,020,883	\$236,872

(Concluded)

As those discussed in Note 20, the bonds holders of the third unsecured convertible overseas bonds issued by the Company in September 2013 have exercised the conversion right in 2017 as a result of an increase in the Company's capital and capital surplus by NT\$4,242,577 thousand (US\$143,137 thousand) and NT\$9,657,905 thousand (US\$325,840 thousand), respectively.

Except those discussed in Note 18, the Company and its subsidiary, ASE Test, Inc., lease the land on which their buildings are located under various operating lease agreements with the ROC government expiring through January 2037. The agreements grant these entities the option to renew the leases and reserve the right for the lessor to adjust the lease payments upon an increase in the assessed value of the land and to terminate the leases under certain conditions. In addition, the Group leases buildings, machinery and equipment under operating leases.

The subsidiaries' offices located in U.S.A. and Japan, etc. are leased from other parties and the lease terms will expire through 2018 to 2023 with the option to renew the leases upon expiration.

The Group recognized rental expense of NT\$1,390,821 thousand, NT\$1,411,533 thousand and NT\$ 1,193,477 thousand (US\$40,266 thousand) for the years ended December 31, 2015, 2016 and 2017, respectively, from the aforementioned operating lease arrangements and the land use rights disclosed in Note 18.

As of December 31, 2017, the future minimum lease payments of non-cancellable operating lease commitments were as follows:

	NT\$	US\$ (Note 4)
Less than 1 year	\$246,026	\$8,300
1-5 years	439,408	14,825
More than 5 years	419,232	14,144
	\$1,104,666	\$37,269

33.

### CAPITAL MANAGEMENT

The capital structure of the Group consists of debt and equity. The Group manages its capital to ensure that entities in the Group will be able to continue as going concerns while maximizing the return to shareholders through the optimization of the debt and equity balance. Key management personnel of the

Table of Contents

Group periodically reviews the cost of capital and the risks associated with each class of capital. In order to balance the overall capital structure, the Group may adjust the amount of dividends paid to shareholders, the number of new shares issued or repurchased, and the amount of new debt issued or existing debt redeemed.

The Group is not subject to any externally imposed capital requirements except those discussed in Note 19.

## 34. FINANCIAL INSTRUMENTS

## a. Fair value of financial instruments that are not measured at fair value

## 1) Fair value of financial instruments not measured at fair value but for which fair value is disclosed

Except bonds payable measured at amortized cost, the management considered that the carrying amounts of financial assets and financial liabilities not measured at fair value approximate their fair values. The carrying amounts and fair value of bonds payable as of December 31, 2016 and 2017, respectively, were as follows:

	Carrying Amount		Fair Value	
	NT\$	US\$ (Note 4)	NT\$	US\$ (Note 4)
December 31, 2016	\$36,999,903		\$37,300,356	
December 31, 2017	23,142,780	\$780,796	23,247,085	\$784,315

## 2) Fair value hierarchy

The aforementioned fair value hierarchy of bonds payable was Level 3 which was determined based on discounted cash flow analysis with the applicable yield curve for the duration or the latest trading prices. The significant unobservable inputs is discount rates that reflected the credit risk of various counterparties and the latest trading prices.

## b. Fair value of financial instruments that are measured at fair value on a recurring basis

## 1) Fair value hierarchy

Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

	Level 1 NT\$	Level 2 NT\$	Level 3 NT\$	Total NT\$
December 31, 2016				
Financial assets at FVTPL				
Financial assets designated as at FVTPL				
Private-placement convertible bonds	\$-	\$100,583	\$-	\$100,583
Derivative financial assets				
Forward exchange contracts	-	462,339	-	462,339
Forward currency options	-	66,872	-	66,872
Non-derivative financial assets held for trading				
Quoted shares	\$1,855,073	\$-	\$-	\$1,855,073
Open-end mutual funds	584,945	-	-	584,945
	\$2,440,018	\$629,794	\$-	\$3,069,812
Available-for-sale financial assets				
Unquoted shares	\$-	\$-	\$631,418	\$631,418
Limited Partnership	-	-	273,372	273,372
Open-end mutual funds	243,458	-	-	243,458
Quoted shares	146,786	-	-	146,786
	\$390,244	\$-	\$904,790	\$1,295,034
Financial liabilities at FVTPL				
Derivative financial liabilities				
Conversion option, redemption option and put option of convertible bonds	\$-	\$1,213,890	\$-	\$1,213,890
Swap contracts	-	422,934	-	422,934
Forward exchange contracts	-	108,912	-	108,912
Foreign currency option contracts	-	17,924	-	17,924
	\$-	\$1,763,660	\$-	\$1,763,660

F-85

Table of Contents

	Level 1		Level 2		Level 3		Total	
	NT\$	US\$	NT\$	US\$	NT\$	US\$	NT\$	US\$
		(Note 4)		(Note 4)		(Note 4)		(Note 4)
December 31, 2017								
Financial assets at FVTPL								
Financial assets designated as at FVTPL								
Private-placement convertible bonds	\$-	\$-	\$100,496	\$3,391	\$-	\$-	\$100,496	\$3,391
Derivative financial assets								
Forward exchange contracts	-	-	61,325	2,069	-	-	61,325	2,069
Swap contracts	-	-	60,538	2,042	-	-	60,538	2,042
Non-derivative financial assets held for trading								
Quoted shares	4,410,732	148,810	-	-	-	-	4,410,732	148,810
Open-end mutual funds	589,976	19,905	-	-	-	-	589,976	19,905
	\$5,000,708	\$168,715	\$222,359	\$7,502	\$-	\$-	\$5,223,067	\$176,217
Available-for-sale financial assets								
Unquoted shares	\$-	\$-	\$-	\$-	\$662,477	\$22,350	\$662,477	\$22,350
Limited partnership	-	-	-	-	246,072	8,302	246,072	8,302
Quoted shares	279,791	9,440	-	-	-	-	279,791	9,440
Open-end mutual funds	23,825	804	-	-	-	-	23,825	804
	\$303,616	\$10,244	\$-	\$-	\$908,549	\$30,652	\$1,212,165	\$40,896
Financial liabilities at FVTPL								
Derivative financial liabilities								
Swap contracts	\$-	\$-	\$652,107	\$22,001	\$-	\$-	\$652,107	\$22,001
Forward exchange contracts	-	-	25,323	854	-	-	25,323	854
	\$-	\$-	\$677,430	\$22,855	\$-	\$-	\$677,430	\$22,855

For the financial assets and liabilities that were measured at fair value on a recurring basis held for the years ended December 31, 2016 and 2017, there were no transfers between Level 1 and Level 2 of the fair value hierarchy.

F-86



Table of Contents

## 2) Reconciliation of Level 3 fair value measurements of financial assets

The financial assets measured at Level 3 fair value were equity investments with no quoted prices classified as available-for-sale financial assets - non-current. Reconciliations for the years ended December 31, 2015, 2016 and 2017 were as follows:

	For the Year Ended December 31			US\$ (Note 4)
	2015	2016	2017	
	NT\$	NT\$	NT\$	
Balance at January 1	\$778,866	\$741,089	\$904,790	\$30,526
Purchases	2,010	495,928	2,649	89
Total gain or loss				
In profit or loss	(15,891 )	(100,734)	28	1
In other comprehensive income	21,195	(202,565)	17,284	583
Disposals	(45,091 )	(28,928 )	(16,202 )	(547 )
Balance at December 31	\$741,089	\$904,790	\$908,549	\$30,652

## 3) Valuation techniques and assumptions applied for the purpose of measuring fair value

## a) Valuation techniques and inputs applied for the purpose of measuring Level 2 fair value measurement

**Financial Instruments****Valuation Techniques and Inputs**

Derivatives - swap contracts, forward exchange contracts and foreign currency option contracts

Discounted cash flows - Future cash flows are estimated based on observable forward exchange rates at balance sheet dates and contract forward exchange rates, discounted at rates that reflected the credit risk of various counterparties.

Derivatives - conversion option, redemption option and put option of convertible bonds

Option pricing model - Incorporation of present value techniques and reflect both the time value and the intrinsic value of options

Private-placement convertible bonds

Discounted cash flows - Future cash flows are estimated based on observable stock prices at balance sheet dates and contract conversion prices, discounted at rates that reflected the credit risk of various counterparties.

## b) Valuation techniques and inputs applied for the purpose of measuring Level 3 fair value measurement

The fair value of the Group's investments in unquoted shares on Level 3 fair value measurement were measured using market approach based on investees' recent financing activities, technical development, valuation of investees comparable companies, market conditions and other economic indicators.

The fair values of investments in limited partnership are measured by estimating future cash inflows from disposal (net of transaction cost). The Group recognized an impairment loss of NT\$90,000 thousand and NT\$50,206 thousand (US\$1,694 thousand) under the line item of other gains and losses in the consolidated statements of comprehensive income for the years ended December 31, 2016 and 2017, respectively.

F-87

Table of Contents

## c. Categories of financial instruments

	December 31		
	2016	2017	
	NT\$	NT\$	US\$ (Note 4)
Financial assets			
FVTPL			
Designated as at FVTPL	\$ 100,583	\$ 100,496	\$ 3,391
Held for trading	2,969,229	5,122,571	172,826
Available-for-sale financial assets	1,295,034	1,212,165	40,896
Loans and receivables (Note 1)	92,082,628	103,973,567	3,507,881
Financial liabilities			
FVTPL			
Held for trading	1,763,660	677,430	22,855
Measured at amortized cost (Note 2)	168,397,006	139,561,999	4,708,569

Note 1: The balances included loans and receivables measured at amortized cost which comprise cash and cash equivalents, trade and other receivables and other financial assets.

Note 2: The balances included financial liabilities measured at amortized cost which comprise short-term borrowings, trade and other payables, bonds payable and long-term borrowings.

## d. Financial risk management objectives and policies

The derivative instruments used by the Group are to mitigate risks arising from ordinary business operations. All derivative transactions entered into by the Group are designated as either hedging or trading. Derivative transactions entered into for hedging purposes must hedge risk against fluctuations in foreign exchange rates and interest rates arising from operating activities. The currencies and the amount of derivative instruments held by the Group must match its hedged assets and liabilities denominated in foreign currencies.

The Group's risk management department monitors risks to mitigate risk exposures, reports unsettled position, transaction balances and related gains or losses to the Group's chief financial officer on monthly basis.

1)

Market risk

The Group's activities exposed it primarily to the financial risks of changes in foreign currency exchange rates and interest rates. Gains or losses arising from fluctuations in foreign currency exchange rates of a variety of derivative financial instruments were approximately offset by those of hedged items. Interest rate risk was not significant due to the cost of capital was expected to be fixed.

There had been no change to the Group's exposure to market risks or the manner in which these risks were managed and measured.

a)

Foreign currency exchange rate risk

The Group had sales and purchases as well as financing activities denominated in foreign currency which exposed the Group to foreign currency exchange rate risk. The Group entered into a variety of derivative financial instruments to hedge foreign currency exchange rate risk to minimize the fluctuations of assets and liabilities denominated in foreign currencies.

F-88

Table of Contents

The carrying amounts of the Group's foreign currency denominated monetary assets and liabilities (including those eliminated upon consolidation) as well as derivative instruments which exposed the Group to foreign currency exchange rate risk at each balance sheet date are presented in Note 39.

The Group was principally subject to the impact to exchange rate fluctuation in US\$ and JPY against NT\$ or CNY. 1% is the sensitivity rate used when reporting foreign currency exchange rate risk internally to key management personnel and represents management's assessment of the reasonably possible change in foreign currency exchange rates. The sensitivity analysis included financial assets and liabilities and inter-company receivables and payables within the Group. The changes in profit before income tax due to a 1% change in U.S. dollars and Japanese yen both against NT\$ and CNY would be NT\$18,000 thousand, NT\$69,000 thousand and NT\$101,000 thousand (US\$3,408 thousand) for the years ended December 31, 2015, 2016 and 2017, respectively. Hedging contracts and hedged items have been taken into account while measuring the changes in profit before income tax. The abovementioned sensitivity analysis mainly focused on the foreign currency monetary items at the end of the year. As the year-end exposure did not reflect the exposure for the years ended December 31, 2015, 2016 and 2017, the abovementioned sensitivity analysis was unrepresentative of those years.

b)

Interest rate risk

Except a portion of long-term borrowings and bonds payable at fixed interest rates, the Group was exposed to interest rate risk because group entities borrowed funds at floating interest rates. Changes in market interest rates will lead to variances in effective interest rates of borrowings from which the future cash flow fluctuations arise. The Group entered into a variety of derivative financial instruments to hedge interest rate risk to minimize the fluctuations of assets and liabilities denominated in interest rate.

The carrying amounts of the Group's financial assets and financial liabilities with exposure to interest rates at each balance sheet date were as follows:

	December 31		US\$ (Note 4)
	2016	2017	
	NT\$	NT\$	
Fair value interest rate risk			
Financial liabilities	\$30,243,887	\$17,552,955	\$592,205
Cash flow interest rate risk			
Financial assets	29,977,709	39,880,736	1,345,504
Financial liabilities	65,800,323	42,270,321	1,426,124

For assets and liabilities with floating interest rates, a 100 basis point increase or decrease was used when reporting interest rate risk internally to key management personnel. If interest rates had been 100 basis points (1%) higher or lower and all other variables held constant, the Group's profit before income tax for the years ended December 31, 2015, 2016 and 2017 would have decreased or increased approximately by NT\$117,000 thousand, NT\$358,000 thousand and NT\$24,000 thousand (US\$810 thousand), respectively. Hedging contracts and hedged items have been taken into account while measuring the changes in profit before income tax. The abovementioned sensitivity analysis mainly focused on the interest rate items at the end of the reporting period. As the period-end exposure did not reflect the exposure for the years ended December 31, 2015, 2016 and 2017, the abovementioned sensitivity analysis was unrepresentative of those periods.

Table of Contents

## c) Other price risk

The Group was exposed to equity or debt price risk through its investments in financial assets at FVTPL, including private-placement convertible bonds, quoted shares, open-end mutual funds, and available-for-sale financial assets. If equity or debt prices were 1% higher or lower, profit before income tax for the years ended December 31, 2015, 2016 and 2017 would have increased or decreased approximately by NT\$7,100 thousand, NT\$26,000 thousand and NT\$52,000 thousand (US\$1,754 thousand), respectively, and other comprehensive income before income tax for the years ended December 31, 2015, 2016 and 2017 would have increased or decreased approximately by NT\$10,000 thousand, NT\$13,000 thousand and NT\$13,000 thousand (US\$439 thousand), respectively.

In addition, the Group was also exposed to the Company's ordinary share price risk through Bonds Options recognized as financial liabilities held for trading. 7% is the sensitivity rate used when reporting price risk internally to key management personnel. If the Company's ordinary share price increased or decreased by 7%, profit before income tax for the years ended December 31, 2015, and 2016 would have decreased approximately by NT\$605,000 thousand and NT\$510,000 thousand, respectively, or increased approximately by NT\$638,000 thousand and NT\$445,000 thousand, respectively.

## 2) Credit risk

Credit risk refers to the risk that counterparty will default on its contractual obligations resulting in financial loss to the Group. The Group's credit risk arises from cash and cash equivalents, receivables and other financial assets. The Group's maximum exposure to credit risk was the carrying amounts of financial assets in the consolidated balance sheets.

The Group dealt with counterparties creditworthy and has a credit policy and trade receivable management procedures to ensure recovery and evaluation of trade receivables. Except for those discussed in Note 9, the Group's counterparties consisted of a large number of customers and banks and there was no significant concentration of credit risk exposure.

## 3) Liquidity risk

The Group manages liquidity risk by maintaining adequate working capital and banking facilities to fulfill the demand for cash flow used in the Group's operation and capital expenditure. The Group also monitors its compliance with all the loan covenants. Liquidity risk is not considered to be significant.

In the table below, financial liabilities with a repayment on demand clause were included in the earliest time band regardless of the probability of counter-parties choosing to exercise their rights. The maturity dates for other

non-derivative financial liabilities were based on the agreed repayment dates.

To the extent that interest flows are floating rate, the undiscounted amounts were derived from the interest rates at each balance sheet date.

	<b>On Demand or Less than 1 Month</b>	<b>1 to 3 Months</b>	<b>3 Months to 1 Year</b>	<b>1 to 5 Years</b>	<b>More than 5 Years</b>
	NT\$	NT\$	NT\$	NT\$	NT\$
December 31, 2016					
Non-derivative financial liabilities					
Non-interest bearing	\$23,907,221	\$20,553,395	\$4,360,322	\$42,285	\$190,941
Floating interest rate liabilities	9,733,727	5,232,407	6,634,931	44,504,416	1,728,448

(continued)



Table of Contents

	<b>On Demand or Less than 1 Month</b>	<b>1 to 3 Months</b>	<b>3 Months to 1 Year</b>	<b>1 to 5 Years</b>	<b>More than 5 Years</b>
	NT\$	NT\$	NT\$	NT\$	NT\$
Fixed interest rate liabilities	\$5,360,644	\$1,019,221	\$10,549,983	\$28,553,095	\$2,062,500
	\$39,001,592	\$26,805,023	\$21,545,236	\$73,099,796	\$3,981,889

(concluded)

December 31, 2017

## Non-derivative financial liabilities

Non-interest bearing	\$30,695,797	\$18,387,296	\$4,549,468	\$2,807	\$176,199
Floating interest rate liabilities	6,641,541	4,153,830	5,101,178	27,196,245	900,310
Fixed interest rate liabilities	8,522,765	7,526,270	1,526,449	11,902,335	6,462,396
	\$45,860,103	\$30,067,396	\$11,177,095	\$39,101,387	\$7,538,905

December 31, 2017

## Non-derivative financial liabilities

	<b>On Demand or Less than 1 Month</b>	<b>1 to 3 Months</b>	<b>3 Months to 1 Year</b>	<b>1 to 5 Years</b>	<b>More than 5 Years</b>
	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)
Non-interest bearing	\$1,035,621	\$620,354	\$153,491	\$95	\$5,945
Floating interest rate liabilities	224,073	140,143	172,104	917,552	30,375
Fixed interest rate liabilities	287,543	253,923	51,500	401,563	218,029
	\$1,547,237	\$1,014,420	\$377,095	\$1,319,210	\$254,349

The amounts included above for floating interest rate instruments for non-derivative financial liabilities was subject to change if changes in floating interest rates differ from those estimates of interest rates determined at each balance sheet date.

The following table detailed the Group's liquidity analysis for its derivative financial instruments. The table was based on the undiscounted contractual net cash inflows and outflows on derivative instruments that settle on a net basis, and the undiscounted gross cash inflows and outflows on those derivatives that require gross settlement. When the amounts payable or receivable are not fixed, the amounts disclosed have been determined by reference to the projected interest rates as illustrated by the yield curves at each balance sheet date.

	<b>On Demand or Less than 1 Month</b>	<b>1 to 3 Months</b>	<b>3 Months to 1 Year</b>
	NT\$	NT\$	NT\$
December 31, 2016			
Net settled			
Forward exchange contracts	\$22,680	\$13,320	\$ -
Foreign currency option contracts	\$(344 )	\$-	\$ -
Gross settled			
Forward exchange contracts			
Inflows	\$5,134,196	\$912,213	\$ -
Outflows	(5,245,724)	(915,900)	-
	(111,528 )	(3,687 )	-

(continued)

F-91

Table of Contents

	<b>On Demand or Less than</b>	<b>1 to 3 Months</b>	<b>3 Months to 1 Year</b>
	<b>1 Month</b>		
	NT\$	NT\$	NT\$
Swap contracts			
Inflows	\$5,345,159	\$17,399,695	\$43,537,500
Outflows	(5,439,190 )	(17,540,927 )	(42,882,201 )
	(94,031 )	(141,232 )	655,299
	\$(205,559 )	\$(144,919 )	\$655,299

December 31, 2017

Net settled

Forward exchange contracts \$(8,820 ) \$- \$-

Gross settled

Forward exchange contracts

Inflows	\$3,711,302	\$2,169,093	\$390,379
Outflows	(3,679,154 )	(2,138,635 )	(386,880 )
	32,148	30,458	3,499

Swap contracts

Inflows	12,116,531	14,434,880	36,676,224
Outflows	(12,189,576)	(14,629,738)	(36,452,898)
	(73,045 )	(194,858 )	223,826

\$(40,897 ) \$(164,400 ) \$227,325

(concluded)

<b>On Demand or Less than</b>	<b>1 to 3 Months</b>	<b>3 Months to 1 Year</b>
<b>1 Month</b>		
US\$	US\$	US\$
(Note 4)	(Note 4)	(Note 4)

December 31, 2017

Net settled

Forward exchange contracts \$ (298 ) \$ - \$ -

(Continued)

F-92

Table of Contents

	<b>On Demand or Less than</b>	<b>1 to 3 Months</b>	<b>3 Months to 1 Year</b>
	<b>1 Month</b>		
	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)
Gross settled			
Forward exchange contracts			
Inflows	\$125,213	\$73,181	\$13,171
Outflows	(124,128)	(72,154 )	(13,154 )
	1,085	1,027	118
Swap contracts			
Inflows	408,790	487,007	1,237,389
Outflows	(411,254)	(493,581)	(1,229,838)
	(2,464 )	(6,574 )	7,551
	\$(1,379 )	\$(5,547 )	\$7,669
(Concluded)			

## e. Reconciliation of liabilities arising from financing activities

The table below details changes in the Group's liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flows were, of future cash flows will be, classified in the Group's condensed consolidated statement of cash flows as cash flows from financing activities.

For the year ended December 31, 2017

	Short-term borrowings	Bonds payable	Long-term borrowings	Total
	NT\$	NT\$	NT\$	NT\$
Balance at January 1, 2017	\$20,955,522	\$36,999,903	\$53,115,563	\$111,070,988
Financing cash flows	(2,038,993 )	(1,123,972 )	(16,473,381)	(19,636,346 )
Non-cash changes				
Amortization of issuance cost	-	319,463	5,790	325,253
Converted to ordinary shares in current period	-	(11,650,369)	-	(11,650,369 )

Effects of exchange rate changes	(954,058 )	(1,402,245 )	(1,241,344 )	(3,597,647 )
Balance at December 31, 2017	\$17,962,471	\$23,142,780	\$35,406,628	\$76,511,879

	Short-term borrowings US\$ (Note 4)	Bonds payable US\$ (Note 4)	Long-term borrowings US\$ (Note 4)	Total US\$ (Note 4)
Balance at January 1, 2017	\$707,001	\$1,248,310	\$1,792,023	\$3,747,334
Financing cash flows	(68,792 )	(37,920 )	(555,782 )	(662,494 )
Non-cash changes				
Amortization of issuance cost	-	10,778	195	10,973
Converted to ordinary shares in current period	-	(393,062 )	-	(393,062 )
Effects of exchange rate changes	(32,188 )	(47,310 )	(41,881 )	(121,379 )
Balance at December 31, 2017	\$606,021	\$780,796	\$1,194,555	\$2,581,372

### 35. RELATED PARTY TRANSACTIONS

Balances and transactions within the Group had been eliminated upon consolidation. Details of transactions between the Group and other related parties were disclosed as follows:

#### a. Related parties

In addition to those disclosed in Note 13 and NXP B.V. as a related party of the Group's subsidiary, ASEN, over which NXP B.V. has significant influence, other related parties were as follows:

Related Parties	Relationship with the Corporation
ASE Cultural and Educational Foundation	Substantial related party
Fu Hwa Construction Co., Ltd.	Associate's subsidiary

The Company contributed each NT\$100,000 thousand (US\$3,374 thousand) to ASE Cultural and Educational Foundation during 2015, 2016 and 2017, respectively, for environmental charity in promoting the related domestic environmental protection and public service activities (Note 37).

c. In 2016, the Company acquired patents and specific technology from DECA at NT\$403,543 thousand, which was primarily based on independent professional appraisal reports. As of December 31, 2016 and 2017, NT\$161,250

thousand and NT\$93,000 thousand (US\$3,138 thousand), respectively, has not been paid and was accrued under the line item of other payables and other non-current liabilities.

F-93

Table of Contents

d. The Company contracted with Fu Hwa Construction Co., Ltd. to construct a female employee dormitory on current leased land. Total consideration was primarily based on independent professional appraisal reports. During 2015 and 2016, the employee dormitory has been capitalized for NT\$504,600 thousand and NT\$875,000 thousand, respectively. The female employee dormitory has been completely constructed in 2016. As of December 31, 2016, NT\$228,500 thousand has not been paid and was accrued under the line item of other payables, which was fully repaid in March 2017.

e. In February 2016, USIE repurchased 1,801 thousand shares of USIE's outstanding ordinary shares from the Group's key management personnel with approximately NT\$1,130,650 thousand.

## f. Compensation to key management personnel

	For the Year Ended December 31			US\$ (Note 4)
	2015	2016	2017	
	NT\$	NT\$	NT\$	
Short-term employee benefits	\$812,002	\$790,460	\$860,631	\$29,036
Post-employment benefits	3,944	4,790	2,858	97
Share-based payments	17,937	11,547	-	-
	\$833,883	\$806,797	\$863,489	\$29,133

The compensation to the Company's key management personnel is determined according to personal performance and market trends.

## 36. ASSETS PLEDGED AS COLLATERAL OR FOR SECURITY

In addition to Note 9, the following assets were provided as collateral for bank borrowings and the tariff guarantees of imported raw materials:

	December 31		US\$ (Note 4)
	2016	2017	
	NT\$	NT\$	
Inventories related to real estate business	\$16,813,023	\$4,822,043	\$162,687
Investment properties	-	7,151,382	241,275
Land use rights (recorded as long-term prepayment for lease)	-	6,813,751	229,884



Other financial assets (including current and non-current)	220,228	66,726	2,251
	\$17,033,251	\$18,853,902	\$636,097

### 37. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED COMMITMENTS

In addition to those disclosed in other notes, significant commitments and contingencies of the Group as of each balance sheet date were as follows:

<sup>a.</sup> As of December 31, 2016 and 2017, unused letters of credit of the Group were approximately NT\$97,000 thousand and NT\$20,000 thousand (US\$675 thousand), respectively.

<sup>b.</sup> As of December 31, 2016 and 2017, outstanding commitments to purchase property, plant and equipment of the Group were approximately NT\$6,630,957 thousand and NT\$7,019,377 thousand (US\$236,821 thousand), respectively, of which NT\$668,509 thousand and NT\$294,194 thousand (US\$9,926 thousand) had been prepaid, respectively. As of December 31, 2016 and 2017, the commitment that the Group has contracted for the construction related to our real estate business were approximately NT\$1,574,822 thousand and NT\$1,548,806 thousand (US\$52,254 thousand), respectively.

Table of Contents

In consideration of corporate social responsibility for environmental protection, the Company's board of directors, in c. December 2013, approved contributions to be made in the next 30 years, at a total amount of NT\$3,000,000 thousand, at the minimum, to environmental protection efforts in Taiwan.

In January 2018, the Company's board of directors approved to contribute NT\$100,000 thousand (US\$3,374 thousand) to ASE Cultural & Educational Foundation for continuously implementing environmental effort in promoting the related domestic environmental protection and public service activities.

## 38. SIGNIFICANT SUBSEQUENT EVENTS

In February 2018, Universal Global Electronics Co., Limited, a new subsidiary of the Group, has signed a joint venture agreement with other company and plans to form a joint venture in Brazil.

## 39. SIGNIFICANT ASSETS AND LIABILITIES DENOMINATED IN FOREIGN CURRENCIES

The following information was aggregated by the foreign currencies other than functional currencies of the group entities and the exchange rates between foreign currencies and respective functional currencies were disclosed. The significant financial assets and financial liabilities denominated in foreign currencies were as follows:

	<b>Foreign Currencies</b>	Exchange Rate	<b>Carrying Amount</b>
	<b>(In Thousand)</b>		<b>(In Thousand)</b>
December 31, 2016			
Monetary financial assets			
US\$	\$3,106,557	US\$1=NT\$32.25	\$100,186,466
US\$	1,020,769	US\$1=CNY6.9370	32,919,814
JPY	4,976,309	JPY1=NT\$0.2756	1,371,471
JPY	9,277,760	JPY1=US\$0.0085	2,556,951
Monetary financial liabilities			
US\$	3,013,288	US\$1=NT\$32.25	97,178,536
US\$	891,487	US\$1=CNY6.9370	28,750,462

JPY	5,881,716	JPY1=NT\$0.2756	1,621,001
JPY	9,543,756	JPY1=US\$0.0085	2,630,259

December 31, 2017

Monetary financial assets

US\$	3,065,296	US\$1=NT\$29.76	91,223,195
US\$	1,193,369	US\$1=CNY6.5342	35,514,653
JPY	5,005,435	JPY1=NT\$0.2642	1,322,436
JPY	8,113,284	JPY1=US\$0.0089	2,143,530

(continued)

F-95

Table of Contents

	<b>Foreign Currencies</b>	Exchange Rate	<b>Carrying Amount</b>
	<b>(In Thousand)</b>		<b>(In Thousand)</b>
Monetary financial liabilities			
US\$	\$ 2,902,995	US\$1=NT\$29.76	\$ 86,393,137
US\$	1,007,629	US\$1=CNY6.5342	29,987,042
JPY	5,415,677	JPY1=NT\$0.2642	1,430,822
JPY	8,598,832	JPY1=US\$0.0089	2,271,811

(concluded)

The significant realized and unrealized foreign exchange gain (loss) were as follows:

Functional Currencies	For the Year Ended December 31		2016		2017		Net Foreign Exchange Gain	
	2015	Net Foreign Exchange Gain (Loss)	Exchange Rate	Net Foreign Exchange Gain (Loss)	Exchange Rate	Net Foreign Exchange Gain	US\$ (Not 4)	
	Exchange Rate	NT\$		NT\$		NT\$		
NT\$		\$(695,510)		\$ 1,494,044		\$ 4,130,243	\$ 139,347	
US\$	US\$1=NT\$32.825	136,795	US\$1=NT\$32.25	203,258	US\$1=NT\$29.76	(244,802 )	(8,259 )	
CNY	CNY1=NT\$5.0550	(271,358)	CNY1=NT\$4.649	224,393	CNY1=NT\$4.5545	(337,630 )	(11,391 )	
		\$(830,073)		\$ 1,921,695		\$ 3,547,811	\$ 119,697	

40.

OTHERS

a) On December 20, 2013, the Kaohsiung Environmental Protection Bureau (“KEPB”) imposed a fine of NT\$102,014 thousand (“the Administrative Fine”) upon the Company for the violation of the Water Pollution Control Act. The Company filed an administrative appeal to nullify the Administrative Fine, which, however, was dismissed by the Kaohsiung City Government. The Company then filed a lawsuit with the Kaohsiung High Administrative Court seeking to revoke the dismissal decision made by the Kaohsiung City Government (the “Administrative Appeal Decision”) and the Administrative Fine, and to demand a refund of the fine paid by the Company. The judgment of

the Kaohsiung High Administrative Court was rendered on March 22, 2016, ruling to revoke the Administrative Appeal Decision and the Administrative Fine, and to dismiss the other complaint filed by the Company (i.e., to demand a refund of the fine paid by the Company). The Company appealed against the unfavorable ruling on April 14, 2016. On June 8, 2017, the Supreme Administrative Court handed down a final and unappealable judgment which is in favor of the Company and ordered KEPB to return to the Company the fine already paid by the Company.

For the future development and sustainable development of semiconductor industry, the Company's board of directors approved in June 2016 to enter into and execute a joint share exchange agreement with SPIL to establish ASE Industrial Holding Co., Ltd. ("HoldCo") and HoldCo will acquire all issued and outstanding shares of both ASE and SPIL in the way of share exchange. The share exchange will be conducted at an exchange ratio of 1 ordinary share of the Company for 0.5 ordinary share of HoldCo, and at NT\$55 in cash per SPIL's ordinary share, which has been adjusted to NT\$51.2 after SPIL's appropriation of earnings in 2016. The estimated cash consideration paid per SPIL's ordinary share shall not be subject to adjustment if the aggregate amount of the cash dividends distributed by SPIL in 2017 is less than 85% of SPIL's net profit for the year ended December 31, 2016.

According to the share exchange agreement, the completion of share exchange transaction is subject to the satisfaction or waiver of all conditions precedent. Unless the Company and SPIL entering into another agreement, this share exchange agreement shall be terminated automatically if the aforementioned conditions precedent are not satisfied or to be waived on or before December 31, 2017. On November 24, 2017, the Ministry of Commerce of the People's Republic of China announced that it has conditionally approved the proposed transaction. On December 14, 2017, the Company and SPIL entered into an addendum to the aforementioned joint share exchange agreement to amend the definition of Long Stop Date from December 31, 2017 to October 31, 2018. As of the date the consolidated financial statements were approved for issue by board of directors, the share exchange transaction has been approved both at the Company and SPIL's special shareholders' meetings, and will be completed on April 30, 2018 on which the HoldCo will be established.

Table of Contents

Due to the aforementioned share exchange agreement, treasury shares of the Company and the convertible bonds embedded with conversion option recognized as equity issued by the Company were affected as follows:

1) For the outstanding balance of the Bonds, except where the Bonds have been redeemed or repurchased and cancelled or converted by the holders by exercising their conversion rights before the share exchange record date, the holders of the Bonds may, after the Company obtains approval from all relevant competent authorities and after the share exchange record date, convert such outstanding balance into newly issued HoldCo common shares. The conversion shall be subject to applicable laws, the indenture of the Bonds and the share exchange ratio. As of December 31, 2017, the outstanding balance of the Bonds has been fully converted or redeemed.

2) Treasury shares purchased before the share exchange record date for the conversion of the Currency Linked Bonds will be exchanged to HoldCo's ordinary shares, which will still be held by the Company, based on the agreed share exchange ratio. The conversion price of the Currency Linked Bonds shall also be adjusted in accordance with the agreed share exchange ratio in the joint share exchange agreement.

3) For the employee share options issued by the Company upon the approval from relevant competent authorities before the execution of the joint share exchange agreement, HoldCo will assume the Company's obligations under the employee share options as of the share exchange record date. Except that the exercise price and amount shall be adjusted in accordance with the agreed share exchange ratio and that the shares subject to exercise shall be converted into HoldCo's newly issued ordinary shares, all other terms and conditions for issuance will remain the same. The final execution arrangements shall be made by HoldCo in compliance with relevant laws and regulations and subject to the approval of relevant competent authorities.

41.

OPERATING SEGMENTS INFORMATION

The Group has the following reportable segments: Packaging, Testing, EMS and Estate. The Group packages bare semiconductors into finished semiconductors with enhanced electrical and thermal characteristics; provides testing services, including front-end engineering testing, wafer probing and final testing services; engages in the designing, assembling, manufacturing and sale of electronic components and telecommunications equipment motherboards, real estate business in development, sale and leasing. Information about other business activities and operating segments that are not reportable are combined and disclosed in "Others." The Group engages in other activities such as substrate production.

The accounting policies for segments are the same as those described in Note 4. The measurement basis for resources allocation and performance evaluation is based on profit before income tax.

Segment information for the years ended December 31, 2015, 2016 and 2017 was as follows:



Table of Contents

## a. Segment revenues and operation results

	Packaging	Testing	EMS	Estate	Others	Adjustments and Eliminations	Total
	NT\$	NT\$	NT\$	NT\$	NT\$	NT\$	NT\$
For the year ended December 31, 2015							
Revenue from external customers	\$116,607,314	\$25,191,916	\$138,242,100	\$1,340	\$3,259,866	\$-	\$283,302,536
Inter-segment revenues (Note)	9,454,671	191,608	58,451,996	-	7,659,282	(75,757,557)	-
Segment revenues	126,061,985	25,383,524	196,694,096	1,340	10,919,148	-	359,060,093
Interest income	53,235	12,536	149,385	54,876	13,445	(41,393)	242,084
Interest expense	(1,520,118)	(5,821)	(147,792)	-	(636,448)	41,393	(2,268,786)
Depreciation and amortization	(18,946,460)	(6,516,912)	(2,738,722)	(24,074)	(1,292,496)	-	(29,518,664)
Share of the profit of associates and joint ventures	126,265	-	-	-	-	-	126,265
Impairment loss	(139,397)	-	(102,389)	-	(16,343)	-	(258,129)
Segment profit before income tax	15,479,868	6,354,140	2,874,944	(172,521)	475,357	-	25,011,788
Expenditures for segment assets	19,691,068	4,754,481	2,917,939	143,436	773,897	-	28,280,821
December 31, 2015							
Investments accounted for using the equity method	37,122,244	-	-	-	-	-	37,122,244
Segment assets	193,323,304	42,652,569	79,997,341	30,000,273	19,013,405	-	364,986,892



Edgar Filing: ADVANCED SEMICONDUCTOR ENGINEERING INC - Form 20-F

For the year  
ended  
December 31,  
2016

Revenue from external customers	125,282,829	27,031,750	115,395,130	3,909,580	3,264,818	-	274,884,107
Inter-segment revenues (Note)	4,929,897	243,980	47,721,424	-	9,186,359	(62,081,660)	-
Segment revenues	130,212,726	27,275,730	163,116,554	3,909,580	12,451,177	-	336,965,767
Interest income	32,499	41,405	130,659	29,131	8,166	(11,793)	230,067
Interest expense	(1,727,127)	(5,980)	(44,433)	-	(451,790)	11,793	(2,217,537)
Depreciation and amortization (After retrospectively adjusted)	(18,706,891)	(6,566,936)	(2,759,298)	(55,271)	(1,382,041)	-	(29,470,437)
Share of the profit of associates and joint ventures (After retrospectively adjusted)	1,513,394	(9,484)	-	-	-	-	1,503,910
Impairment loss	(974,095)	(4,136)	(1,886)	-	-	-	(980,117)
Segment profit before income tax	13,921,640	7,226,531	4,626,263	1,546,326	647,945	-	27,968,705
Expenditures for segment assets	17,561,135	8,247,003	906,042	114,462	852,220	-	27,680,862

December 31,  
2016

Investments accounted for using the equity method (After retrospectively adjusted)	49,597,195	227,495	-	-	-	-	49,824,690
Segment assets (After retrospectively	200,604,111	42,962,643	73,915,639	28,468,242	11,979,941	-	357,930,576

adjusted)

For the year  
ended  
December 31,  
2017

Revenue from external customers	126,225,119	26,157,277	133,948,016	412,863	3,697,933	-	290,441,208
Inter-segment revenues (Note)	4,911,026	184,707	47,119,404	23,943	8,359,697	(60,598,777)	-
Segment revenues	131,136,145	26,341,984	181,067,420	436,806	12,057,630	-	351,039,985
Interest income	43,744	48,532	269,640	30,441	183,824	(269,310)	306,871
Interest expense	(1,969,562)	(11,920)	-	(62,714)	-	269,310	(1,774,886)
Depreciation and amortization	(19,105,457)	(6,476,743)	(2,133,253)	(180,792)	(1,308,939)	-	(29,205,184)
Share of the profit or loss of associates and joint ventures	568,291	(42,509)	-	-	-	-	525,782
Impairment loss	(218,214)	(72,798)	-	-	(473,869)	-	(764,881)
Segment profit before income tax	12,065,304	6,904,067	6,883,327	5,120,301	47,664	-	31,020,663
Expenditures for segment assets	17,769,612	4,507,097	850,235	169,559	381,179	-	23,677,682

December 31,  
2017

Investments accounted for using the equity method	48,566,333	187,418	-	-	-	-	48,753,751
Segment assets	195,503,889	43,383,691	81,588,691	33,080,694	10,365,307	-	363,922,272

Packaging	Testing	EMS	Estate	Others	Adjustments and Eliminations	Total
US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)	US\$ (Note 4)

For the year ended  
December 31,  
2017

Revenue from external customers	\$ 4,258,607	\$ 882,499	\$ 4,519,164	\$ 13,929	\$ 124,762	\$ -	\$ 9,798,961
Inter-segment revenues (Note)	165,689	6,232	1,589,723	808	282,041	(2,044,493)	-
Segment revenues	4,424,296	888,731	6,108,887	14,737	406,803	-	11,843,454
Interest income	1,476	1,637	9,097	1,027	6,202	(9,086)	10,353
Interest expense	(66,450)	(402)	-	(2,116)	-	9,086	(59,882)
Depreciation and amortization	(644,584)	(218,514)	(71,972)	(6,100)	(44,161)	-	(985,331)
Share of the profit or loss of associates and joint ventures	19,173	(1,434)	-	-	-	-	17,739
Impairment loss	(7,362)	(2,456)	-	-	(15,988)	-	(25,806)
Segment profit before income tax	407,061	232,931	232,231	172,750	1,608	-	1,046,581
Expenditures for segment assets	599,515	152,061	28,685	5,721	12,860	-	798,842

December 31,  
2017

Investments accounted for using the equity method	\$ 1,638,540	\$ 6,323	\$-	\$-	\$ -	\$-	\$ 1,644,863
Segment assets	6,595,947	1,463,687	2,752,655	1,116,083	349,707	-	12,278,079

Note: Inter-segment revenues were eliminated upon consolidation.

(Concluded)

F-98

Table of Contents

## b. Revenue from major products and services

	For the Year Ended December 31			US\$ (Note 4)
	2015	2016	2017	
	NT\$	NT\$	NT\$	
Packaging service	\$116,607,314	\$125,282,829	\$126,225,119	\$4,258,607
Testing service	25,191,916	27,031,750	26,157,277	882,499
Electronic components manufacturing service	138,242,100	115,395,130	133,948,016	4,519,164
Others	3,261,206	7,174,398	4,110,796	138,691
	\$283,302,536	\$274,884,107	\$290,441,208	\$9,798,961

## c. Geographical information

Geographical information about revenue from external customers and noncurrent assets are reported based on the country where the external customers are headquartered and noncurrent assets are located, respectively.

## 1) Net revenues from external customers

	For the Year Ended December 31			US\$ (Note 4)
	2015	2016	2017	
	NT\$	NT\$	NT\$	
United States	\$205,730,670	\$180,745,837	\$196,462,345	\$6,628,284
Taiwan	32,631,149	38,868,679	35,413,647	1,194,792
Asia	22,885,128	29,896,304	30,201,332	1,018,938
Europe	20,577,069	23,275,732	26,445,240	892,215
Others	1,478,520	2,097,555	1,918,644	64,732
	\$283,302,536	\$274,884,107	\$290,441,208	\$9,798,961

## 2) Noncurrent assets, excluding financial instruments, post-employment benefit assets and deferred tax assets

December 31		US\$ (Note 4)
2016	2017	
NT\$	NT\$	

Taiwan	\$97,337,094	\$93,350,839	\$3,149,489
China	34,142,577	45,376,164	1,530,910
Others	26,935,370	25,025,498	844,315
	\$158,415,041	\$163,752,501	\$5,524,714

d.

Major customers

Except one customer from which the operating revenues generated from packaging and EMS segments was NT\$88,311,697 thousand, NT\$66,554,659 thousand and NT\$83,873,393 thousand (US\$2,829,737 thousand) in 2015, 2016 and 2017, respectively, the Group did not have other single customer to which the operating revenues exceeded 10% of operating revenues for the years ended December 31, 2015, 2016 and 2017.

F-99