ADVANCED SEMICONDUCTOR ENGINEERING INC
Form 20-F
April 21, 2017

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, 2016**

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**

(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:

| Title of Each Class | Name of Each Exchange on which Registered |
|---|---|
| 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:

7,944,875,346 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, or a non-accelerated filer. See definition of “accelerated filer and large accelerated filer” in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Accelerated filer Non-accelerated filer

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

** As a result of the exercise of employee stock options subsequent to December 31, 2016, as of March 31, 2017, we had 8,273,546,046 shares outstanding.

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USE OF CERTAIN TERMS

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

- "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. an 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 GAPT, a company incorporated under the laws of the PRC;
- "ASEWH" are to ASE (Weihai), Inc., a company incorporated under the laws of the PRC;
- "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;

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- "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 depositary, 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 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, 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;

- "Republic of China", the "ROC" and "Taiwan" are to the Republic of China, including Taiwan and certain other possessions;

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- "ROC GAAP" are to generally accepted accounting principles in the ROC;
- "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 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, 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 depositary 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;

- "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.

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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 30, 2016, which was NT$32.40=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 30, 2016, which was RMB6.9430=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 April 14, 2017, 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$30.31=US$1.00. On April 14, 2017, 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 RMB6.8835 =US$1.00.

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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 cyclicality 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.”

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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, 2014, 2015 and 2016, and the selected consolidated balance sheet data as of December 31, 2015 and 2016 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, 2012 and 2013 and the selected consolidated balance sheet data as of December 31, 2012 and 2013 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. Until and including our consolidated financial statements included in our annual report on Form 20-F for the year ended December 31, 2012, we prepared our consolidated financial statements in accordance with ROC GAAP with reconciliations to U.S. GAAP.

We adopted IFRS for certain filings with the SEC, starting from the filing of our annual report on Form 20-F for the year ended December 31, 2013. Historical financial results as of and for the year ended December 31, 2012 included herein have been adjusted and presented in accordance with IFRS, which differs from the results included in our annual report on Form 20-F for the year ended December 31, 2012. Meanwhile, as required by the FSC, we adopted

Taiwan-IFRS for reporting of our annual and interim consolidated financial statements in the ROC beginning on January 1, 2013. Taiwan-IFRS differs from IFRS in certain respects, including, but not limited to the extent that any new or amended standards or interpretations applicable under IFRS may not be timely endorsed by the FSC.

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.

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| | As of and for the Year Ended December 31, | | | | | |
|---|---|---|---|---|---|---|
| IFRS | 2012 | 2013 | 2014 | 2015 (Retrospectively Adjusted) | 2016 | |
| | NT$ | NT$ | NT$ | NT$ | NT$ | US$ |
| | (in millions, except earnings per share and per ADS data) | | | | | |
| Statement of Comprehensive Income Data: | | | | | | |
| Operating revenues | 193,972.4 | 219,862.4 | 256,591.4 | 283,302.5 | 274,884.1 | 8,484.1 |
| Operating costs | (157,342.7) | (177,040.4) | (203,002.9) | (233,167.3) | (221,689.9) | (6,842.3) |
| Gross profit | 36,629.7 | 42,822.0 | 53,588.5 | 50,135.2 | 53,194.2 | 1,641.8 |
| Operating expenses | (18,922.6) | (20,760.4) | (23,942.7) | (25,250.6) | (26,485.7) | (817.5) |
| Other operating income and expenses, net | 83.2 | (1,348.2) | 228.7 | (251.5) | (800.3) | (24.7) |
| Profit from operations | 17,790.3 | 20,713.4 | 29,874.5 | 24,633.1 | 25,908.2 | 799.6 |
| Non-operating income (expense), net[1] | (1,181.6) | (1,343.6) | (1,339.4) | 378.7 | 2,116.9 | 65.4 |
| Profit before income tax | 16,608.7 | 19,369.8 | 28,535.1 | 25,011.8 | 28,025.1 | 865.0 |
| Income tax expense | (2,960.4) | (3,499.6) | (5,666.0) | (4,311.1) | (5,390.8) | (166.4) |
| Profit for the year | 13,648.3 | 15,870.2 | 22,869.1 | 20,700.7 | 22,634.3 | 698.6 |
| Attributable to | | | | | | |
| Owners of the Company | 13,191.6 | 15,404.5 | 22,228.6 | 19,732.1 | 21,361.6 | 659.3 |
| Non-controlling interests | 456.7 | 465.7 | 640.5 | 968.6 | 1,272.7 | 39.3 |
| | 13,648.3 | 15,870.2 | 22,869.1 | 20,700.7 | 22,634.3 | 698.6 |
| Other comprehensive income (loss), net of income tax | (3,830.7) | 3,233.3 | 5,504.4 | (147.5) | (7,959.3) | (245.7) |
| Total comprehensive income for the year | 9,817.6 | 19,103.5 | 28,373.5 | 20,553.2 | 14,675.0 | 452.9 |
| Attributable to | | | | | | |
| Owners of the Company | 9,420.4 | 18,509.6 | 27,394.3 | 19,659.1 | 13,994.1 | 431.9 |
| Non-controlling interests | 397.2 | 593.9 | 979.2 | 894.1 | 680.9 | 21.0 |
| | 9,817.6 | 19,103.5 | 28,373.5 | 20,553.2 | 14,675.0 | 452.9 |
| Earnings per common share[1] [2]: | | | | | | |
| Basic | 1.77 | 2.05 | 2.89 | 2.58 | 2.79 | 0.09 |
| Diluted | 1.73 | 1.99 | 2.79 | 2.48 | 2.33 | 0.07 |
| Dividends per common share[3] | 2.05 | 1.05 | 1.29 | 2.00 | 1.60 | 0.05 |
| Earnings per equivalent ADS[1] [2]: | | | | | | |
| Basic | 8.86 | 10.26 | 14.46 | 12.89 | 13.94 | 0.43 |
| Diluted | 8.65 | 9.96 | 13.93 | 12.38 | 11.67 | 0.36 |
| Number of common shares[4]: | | | | | | |
| Basic | 7,445.5 | 7,508.5 | 7,687.9 | 7,652.8 | 7,662.9 | 7,662.9 |
| Diluted | 7,568.2 | 7,747.6 | 8,220.7 | 8,250.1 | 8,284.1 | 8,284.1 |
| Number of equivalent ADSs | | | | | | |
| Basic | 1,489.1 | 1,501.7 | 1,537.6 | 1,530.6 | 1,532.6 | 1,532.6 |
| Diluted | 1,513.6 | 1,549.5 | 1,644.1 | 1,650.0 | 1,656.8 | 1,656.8 |
| Balance Sheet Data: | | | | | | |
| Current assets | 97,495.6 | 132,176.5 | 159,955.2 | 156,732.8 | 142,789.7 | 4,407.1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Investments - non-current[1][5] | 2,267.8 | 2,345.5 | 2,409.3 | 38,046.6 | 50,861.3 | 1,569.8 |
| Property, plant and equipment, net | 127,197.8 | 131,497.3 | 151,587.1 | 149,997.1 | 143,880.2 | 4,440.7 |
| Intangible assets | 12,361.3 | 11,953.6 | 11,913.3 | 11,888.6 | 12,119.9 | 374.1 |
| Long-term prepayment for lease | 4,164.1 | 4,072.3 | 2,586.0 | 2,556.2 | 2,237.0 | 69.0 |
| Others[6] | 4,236.0 | 4,676.9 | 5,267.9 | 5,765.6 | 6,063.1 | 187.2 |
| Total assets[1] | 247,722.6 | 286,722.1 | 333,718.8 | 364,986.9 | 357,951.2 | 11,047.9 |
| Short-term debts[7] | 36,884.9 | 44,618.2 | 41,176.0 | 36,983.4 | 20,955.5 | 646.8 |
| Current portion of long-term debts | 3,213.8 | 6,016.5 | 2,835.5 | 16,843.3 | 16,341.1 | 504.3 |
| Long-term debts[8] | 44,591.7 | 50,166.5 | 55,375.8 | 66,535.1 | 74,354.9 | 2,294.9 |
| Other liabilities[9] | 53,211.8 | 60,176.9 | 78,640.1 | 78,700.1 | 79,437.9 | 2,451.8 |
| Total liabilities | 137,902.2 | 160,978.1 | 178,027.4 | 199,061.9 | 191,089.4 | 5,897.8 |
| Share capital | 76,047.7 | 78,180.3 | 78,715.2 | 79,185.7 | 79,568.0 | 2,455.8 |
| Non-controlling interests | 3,505.7 | 4,128.4 | 8,209.9 | 11,492.5 | 11,984.0 | 369.9 |
| Equity attributable to owners of the Company[1] | 106,314.7 | 121,615.6 | 147,481.5 | 154,432.4 | 154,877.8 | 4,780.2 |
| Cash Flow Data: | | | | | | |
| Capital expenditures | (39,029.5) | (29,142.7) | (39,599.0) | (30,280.1) | (26,714.2) | (824.5) |
| Depreciation and amortization | 23,435.9 | 25,470.9 | 26,350.8 | 29,518.7 | 29,422.3 | 908.1 |
| Net cash inflow from operating activities | 33,038.0 | 41,296.0 | 45,863.5 | 57,548.3 | 52,107.9 | 1,608.3 |
| Net cash outflow from investing activities | (43,817.8) | (29,925.8) | (38,817.9) | (63,351.4) | (43,159.5) | (1,332.1) |
| Net cash inflow (outflow) from financing activities | 8,455.8 | 12,794.9 | (2,797.0) | 8,636.3 | (21,087.0) | (650.8) |
| Segment Data: | | | | | | |
| Operating revenues: | | | | | | |
| Packaging | 104,298.3 | 112,603.9 | 121,336.5 | 116,607.3 | 125,282.8 | 3,866.8 |
| Testing | 22,657.0 | 24,732.2 | 25,874.7 | 25,191.9 | 27,031.8 | 834.3 |
| Electronic manufacturing services | 62,747.7 | 78,530.6 | 105,784.4 | 138,242.1 | 115,395.1 | 3,561.6 |
| Others | 4,269.4 | 3,995.7 | 3,595.8 | 3,261.2 | 7,174.4 | 221.4 |
| Gross profit: | | | | | | |
| Packaging | 19,812.5 | 23,673.7 | 33,040.2 | 30,348.5 | 28,524.5 | 880.4 |
| Testing | 7,601.0 | 9,079.4 | 9,632.0 | 9,025.7 | 9,980.6 | 308.0 |
| Electronic manufacturing services | 7,241.3 | 8,054.3 | 9,118.9 | 9,433.4 | 11,234.8 | 346.8 |
| Others | 1,974.9 | 2,014.6 | 1,797.4 | 1,327.6 | 3,454.3 | 106.6 |

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(1) We have completed the identification of difference between the cost of the investment and our share of the net fair value of SPIL's identifiable assets and liabilities in September 2016. Therefore, we retrospectively adjusted the comparative financial statement for the year ended December 31, 2015, which differs from the results included in our annual report on Form 20-F for the year ended December 31, 2015. The retrospective adjustments resulted in a decrease of NT$281.4 million to the investments accounted for using the equity method on the consolidated balance sheet as of December 31, 2015 and share of profit of associates on the consolidated statement of comprehensive income for the year ended December 31, 2015. See Note 13 to our audited consolidated financial statement included in this annual report for more information.

(2) The denominators for diluted earnings per common share and diluted earnings per equivalent ADS are calculated 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.

(4) Represents the weighted average number of shares after retroactive adjustments to give effect to stock dividends. 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 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.

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.

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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.

| | Exchange Rate | | | |
|---|---|---|---|---|
| | Average[(1)] | High | Low | Period End |
| 2012 | 29.47 | 30.28 | 28.96 | 29.05 |
| 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 | | | | |
| October | 31.59 | 31.79 | 31.36 | 31.54 |
| November | 31.75 | 32.01 | 31.41 | 31.92 |
| December | 32.00 | 32.42 | 31.72 | 32.40 |
| 2017 | | | | |
| January | 31.65 | 32.37 | 31.19 | 31.19 |
| February | 30.85 | 31.17 | 30.61 | 30.64 |
| March | 30.65 | 31.03 | 30.14 | 30.38 |
| April (through April 14, 2017) | 30.47 | 30.63 | 30.31 | 30.31 |

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

On April 14, 2017, the exchange rate as set forth in the H.10 weekly statistical release by the Federal Reserve Board was NT$30.31=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.

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 2016, approximately 52.2%,11.5% and 36.3% 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 50.6%,16.9%, 18.4%, 7.2% and 6.0% of our operating revenues from electronic manufacturing services were attributed to the communications, computing, 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.

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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 “fabless” 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:

- 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;

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- 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.

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:

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- 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, tsunami and other natural disasters, as well as industrial and other incidents such as fires and power outages.

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; furthermore, we entered into the Joint Share Exchange Agreement with SPIL in June 2016 to take advantage of the synergy effect of business combination between SPIL and us. 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.

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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.

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. As of April 21,

2017, we beneficially own 1,037,300,000 common shares of SPIL (calculated as the sum of 988,847,740 common shares of SPIL and 48,452,260 common shares of SPIL underlying 9,690,452 American depositary 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 March 31, 2017 as reported in SPIL's annual report on Form 20-F for the year ended December 31, 2016). 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.

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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 in Taiwan. See "Item 4. Information on the Company— History and Development of the Company—Acquisition of Common Shares and American Depositary Shares of SPIL."

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. Although we have obtained regulatory approvals in Taiwan, 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 may face challenges in successfully integrating SPIL into our existing organization or in realizing anticipated benefits and cost synergies. 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 require approvals from relevant regulators and 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:

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- 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, many of which 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 one agreement by us or one of our subsidiaries may also 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.

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, 2016, 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.

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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$1,222.0 million and NT$713.2 million in 2014 and 2015, respectively, and net foreign exchange gains of NT$1,928.4 million (US$59.5 million) in 2016. 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."

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 40.3%, 48.2% and 42.0% of our operating revenues in 2014, 2015 and 2016, respectively. One customer accounted for more than 10.0% of our operating revenues in 2014, 2015 and 2016. 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 cyclicality 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 addition, we entered into a joint venture agreement with TDK Corporation in May 2015 to further expand our business in embedded substrates. 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.

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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.

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 2016, our interconnect materials operations supplied approximately 29.7% 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.

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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 and 2015 on May 30, 2014, June 1, 2015 and May 31, 2016, 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 and 2016. 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. 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.

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In December 2013, the Kaohsiung City Environmental Protection Bureau ordered us to suspend the operations at our K7 Plant's wafer-level process where nickel was used for alleged wastewater discharge violations and imposed a NT$110.1 million fine against us. The NT$110.1 million fine was later reduced to NT$109.4 million as ordered by the Kaohsiung City Environmental Protection Bureau. In December 2014, the Kaohsiung City Environmental Protection Bureau lifted the suspension order and approved the full resumption of operations of our K7 Plant after ordering a series of examinations, hearings and trial runs. In September 2015, the fine was further reduced to NT$102.0 million by the Kaohsiung City Environmental Protection Bureau and we received a refund of NT$7.3 million in October 2015. Although our K7 Plant has resumed full operation, we may be subject to other new environmental claims, charges or investigations on our K7 Plant or other facilities that may cause similar or more sever interruptions to our business and operations.

With respect to the NT$102.0 million administrative penalty imposed on us by the Kaohsiung City Environmental Protection Bureau, we appealed to the Kaohsiung High Administrative Court in August 2014 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 penalty. 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 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. The outcome of the proceeding cannot be predicted with certainty.

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. In September 2015, the Taiwan High Court Kaohsiung District Branch overturned the decision made by Kaohsiung District Court and found the Company not guilty and repealed the criminal penalty imposed on the Company. 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, 2014, 2015 and 2016, we have made contributions in the amount of NT$100.0 million (US$3.1 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 2017 to contribute NT$100.0 million (US$3.1 million) through ASE Cultural and Educational Foundation in environmental projects in 2017. 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."

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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.

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;

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- 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.

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.

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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 price declines and 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, 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.

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

Under IFRS, we are required to evaluate our assets, such as equipment, goodwill and investments, 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$308.1 million, NT$258.1 million and NT$888.2 million (US$27.4 million) in 2014, 2015 and 2016, 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, 2016. 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.

Provisions of our outstanding convertible bonds could discourage an acquisition of us by a third party.

In September 2013, we completed the offering of the 2018 Convertible Bonds, and in July 2015, we completed the offering of the 2018 NTD-linked Convertible Bonds. Certain provisions of our convertible bonds could make it more difficult or more expensive for a third party to acquire us. In the event that (1) our common shares cease to be listed on the TWSE; (2) any person or persons acting together acquire control of us if such person or persons do not have, and would not be deemed to have, control of us as of a specified date; (3) we consolidate with or merge into or sell or transfer all or substantially all of our assets to any other person, unless the consolidation, merger, sale or transfer will not result in the other person or persons acquiring control over us or the successor entity; or (4) one or more other persons acquire the legal or beneficial ownership of all or substantially all of our capital stock, holders of these bonds shall have the right to require us to repurchase all or any portion of the principal amount thereof (which is US$200,000 or any integral multiples thereof) of such holder’s bonds. “Control” means the right to appoint and/or remove all or the majority of the members of our board of directors or other governing body, whether obtained directly or indirectly, and whether obtained by ownership of share capital, the possession of voting rights, contract or otherwise. However, a “change of control” will not be deemed to have occurred (i) solely as a result of the issuance or transfer, with the Company’s corporation, of any preferred shares in the Company’s capital or (ii) if the closing price per common share for any five trading days within the period of 10 consecutive trading days ending immediately after the later of the change of control or the public announcement of the change of control equals or exceeds 110% of the conversion price in effect on each of those five trading days.

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The accounting treatment for our outstanding convertible bonds, including the treatment for conversion option, redemption option and put option embedded in our outstanding convertible bonds, could have a material effect on our reported financial results.

In September 2013, we completed the offering of the 2018 Convertible Bonds. Since the 2018 Convertible Bonds are denominated in U.S. dollars, which is different from our functional currency under IFRS, we separated the conversion option, redemption option and put option embedded in 2018 Convertible Bonds (collectively, the "Bond Options") and recognized them as a freestanding derivative at fair value through profit or loss. To determine the fair value of the Bond Options of the 2018 Convertible Bonds, we are subject to a mark-to-market accounting on the Bond Options embedded in the 2018 Convertible Bonds. As a result, if the fair value of our common shares rises, mark to market of the Bond Options would lead to losses in our financial statements. For each reporting period over the term of the convertible bonds, a gain (or loss) will be reported in our consolidated statement of comprehensive income to the extent the fair value of the Bond Options changes from the previous period. Changes in fair value of the Bond Options generated a loss for NT$777.6 million, NT$112.0 million and a gain for NT$1,418.7 million (US$43.8 million) in 2014, 2015 and 2016, respectively. See note 19 to our audited consolidated financial statements included in this annual report.

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, 2016 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.

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.

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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 52.1%, 46.9% and 48.6% of our operating revenues in 2014, 2015 and 2016, 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.

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.

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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.

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.

*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 heighted 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. During the election campaign, the then president-elect Trump made comments suggesting that he was not supportive of certain existing international trade agreements. At this time, it remains unclear what the new administration would or would not do with respect to these international trade agreements. However, if the new administration takes action to withdraw from or materially modify these international trade agreements, our business, financial condition and results of operations could be adversely affected.

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## 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.

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.

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

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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, 2016 to December 31, 2016, the Taiwan Stock Exchange Index peaked at 9,392.68 on December 9, 2016, and reached a low of 7,664.01 on January 21, 2016. Over the same period, the trading price of our common shares ranged from NT$39.90 per share to NT$28.10 per share. On April 14, 2017, the Taiwan Stock Exchange Index closed at 9,732.93, and the closing value of our common shares was NT$37.85 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.

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 three 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, 2016, 210,794,600 options granted by ASE Inc. were outstanding. Our board of directors and the FSC approved the 5$^{th}$ 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. As of December 31, 2016, none of the bonds has been converted into our common shares, and the balance of the outstanding bonds was US$400.0 million. The initial conversion price was NT$33.085 per common

share, subject to adjustment upon the occurrence of certain events, such as the Capital Increase and cash dividend distribution. As of the date of this annual report, the conversion price is NT$28.96 per common share. Upon full conversion, the outstanding bonds will be converted into 413,756,906 common shares if based on the current conversion price, representing 5.2% of our outstanding shares at the end of December 31, 2016. 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. Moreover, 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. The issuance of the zero coupon convertible bonds due 2018 and the Capital Increase 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:

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(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 depositary, 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 depositary 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 depositary 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.

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.

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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.

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.

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**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.

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.

As of March 31, 2017, SPIL had an aggregate of 3,116,361,139 common shares, including 187,275,560 common shares represented by American depositary shares, issued and outstanding, and we beneficially owned 988,847,740 common shares and 9,690,452 American depositary shares of SPIL. There were no public takeover offers by third parties of ASE's shares which occurred in 2016.

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**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, 2014, 2015 and 2016 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$43,448.6 million, NT$28,280.8 million and NT$27,680.9 million (US$854.3 million), respectively. We had commitments for capital expenditures of approximately US$204.7 million, of which US$20.6 million had been paid as of December 31, 2016, 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 2017 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 2014, 2015 and 2016. 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.

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

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- 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.

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$338.9 billion in 2016. 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.

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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.

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.

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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 2017.

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:

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

| **Process** | **Description** |
|---|---|
| 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. |

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| **Process Description** | |
|---|---|
| 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) | 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. |
| 6. Final Test | 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. |
| 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. |

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:

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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 addition, 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.

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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 2016, our revenues generated from packaging, testing and electronic manufacturing services accounted for 45.6%,9.8% and 42.0% of our operating revenues, respectively.

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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) and aMAP POP (advanced, laser ablation type), which enable our customers to mount packages more easily. 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. Furthermore, we also provide high volume manufacturing experience with silver wire bonding for FCCSP Hybrid packages. 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.

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.

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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-*fc*CSP) | 16-750 | 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. |
| Flip-Chip BGA/ HF FCBGA(High Performance / Heat Spreader / FCBGA) | 16-2916 | 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. |
| 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. |

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| Package Types | Number of Leads | Description | End-Use Applications |
|---|---|---|---|
| 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) POP (Package On Package) | ~ 1000 ~ 256L Memory | 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. |
| 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.

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.

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| Package Types | Number of Leads | Description | End-Use Applications |
|---|---|---|---|
| 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 performance. | Cellular phones, wireless local access networks, personal digital assistant devices and digital cameras. |
| 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. |
| 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. |

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| Package Types | Number of Leads | Description | End-Use Applications |
|---|---|---|---|
| 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 multichip module functions. | High frequency integrated circuits such as wireless communications products, computers servers, personal 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.

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.

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***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 2016, our interconnect materials operations supplied approximately 29.7% 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, | | |
|---|---|---|---|
| | 2014 | 2015 | 2016 |
| Bumping, Flip Chip, WLP and SiP | 25.0 % | 27.1 % | 28.6 % |
| IC Wirebonding[(1)] | 64.4 | 61.9 | 61.4 |
| Discrete and other | 10.6 | 11.0 | 10.0 |
| 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.

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.

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***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 12 GHz 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, home entertainment and personal computer applications, as well as a variety of consumer and application-specific integrated circuits for various specialized applications.

***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, wireless connectivity devices, global positioning system devices, personal navigation devices and digital video broadcasting devices.

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- ***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, | | |
|---|---|---|---|
| | 2014 | 2015 | 2016 |
| Testing Services: | | | |
| Front-end engineering testing | 2.9 % | 4.2 % | 3.6 % |
| Wafer probing | 20.5 | 20.1 | 19.7 |
| Final testing | 76.6 | 75.7 | 76.7 |
| 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; network attached storage; and technical services;
- Communications: Wi-Fi; SiP;
- Consumer products: control boards for flat panel devices; SiP;
- Automotive electronics: automotive electronic manufacturing services; car LED lighting; regulator/rectifier; and

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

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.”

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Customers

Our five largest customers together accounted for approximately 40.3% , 48.2% and 42.0% of our operating revenues in 2014, 2015 and 2016, respectively. One customer accounted for more than 10.0% of our operating revenues in 2014, 2015 and 2016.

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, | | |
|---|---|---|---|
| | 2014 | 2015 | 2016 |
| Communications | 53.3% | 54.7% | 52.2% |
| Computing | 11.6 | 11.1 | 11.5 |
| Consumer electronics/industrial/automotive/other | 35.1 | 34.2 | 36.3 |
| 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.

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2014 | 2015 | 2016 |
| Communications | 55.6 % | 53.2 % | 50.6 % |
| Computing | 18.0 | 14.3 | 16.9 |
| Consumer electronics | 8.9 | 18.7 | 18.4 |
| Industrial | 10.3 | 8.1 | 7.2 |
| Automotive | 6.3 | 4.9 | 6.0 |
| Other | 0.9 | 0.8 | 0.9 |
| 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, | | |
|---|---|---|---|
| | 2014 | 2015 | 2016 |
| United States | 67.8 % | 72.6 % | 65.8 % |
| Taiwan | 14.3 | 11.5 | 14.1 |
| Asia | 9.4 | 8.1 | 10.9 |
| Europe | 8.1 | 7.3 | 8.5 |
| Other | 0.4 | 0.5 | 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.

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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.

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 2016, our interconnect materials operations supplied approximately 29.7% 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.

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Electronic Manufacturing Services

Our manufacturing processes use many raw materials in our electronic manufacturing services. For 2016, raw materials costs accounted for 77.1% 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.”

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, 2017, we operated an aggregate of 15,878 wire bonders, of which 15,789 were fine-pitch wire bonders. As of the same date, 21 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, Kulicke & Soffa Industries Inc., BE Semiconductor Industries N.V., TOWA CORPORATION, ASM Pacific Technology and Allring Tech Co., Ltd.

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, Seiko Epson 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, 2017, we operated an aggregate of 3,747 testers, of which 1,102 were consigned by customers and 102 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.

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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 128 SMT lines as of January 31, 2017.

Intellectual Property

As of January 31, 2017, we held 2,020 Taiwan patents, 945 U.S. patents, 996 PRC patents and 17 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” ar 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 one license agreement with Infineon Technologies AG will expire on November 5, 2017, and another license agreement with Infineon Technologies AG will remain in effect until expiration of the Infineon’s patents licensed by the agreement. 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.

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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.

| Location | ISO/TS 16949[1] | ISO 9001[2] | ISO 14001[3] | ISO 17025[4] | ISO 14064-1[5] | IECQ HSPM QC080000[6] | Sony Green[7] | OHSAS 18001[8] | TOSHMS and SA8000[9] | ISO 50001[10] |
|---|---|---|---|---|---|---|---|---|---|---|
| Taiwan | ü | ü | ü | ü | ü | ü | ü | ü | ü | ü |
| Shanghai, PRC | ü | ü | ü | | ü | ü | | ü | | |
| Suzhou/Kunshan/ Weihai/ Wuxi, PRC | ü | ü | ü | | ü | ü | ü | ü | | |
| Korea | ü | ü | ü | | | ü | ü | ü | | |
| Japan | ü | ü | ü | | | ü | ü | | | |
| Malaysia | ü | ü | ü | | ü | ü | ü | | | |
| Singapore | ü | ü | ü | | | ü | | ü | | |
| California | | ü | ü | ü | | | | | | |

(1) ISO/TS16949 standards were originally created by the International Automotive Task Force in conjunction with 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.

(2) ISO 9001 quality standards, set by the ISO, are related to quality management systems and designed to help 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.

(5) ISO 14064-1 standard is part of the ISO 14000 series of International Standards for environmental management. 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.

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

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

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

(9) TOSHMS is the Taiwan Occupational and Health Management System. SA8000 is the most widely recognized global standard for managing human rights in the workspace.

(10) 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.

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

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

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

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(14) ISO 15408-EAL6 is a framework that outlines the criteria for globally recognized standards and security 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.

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[(1)] | OHSAS 18001 | ISO 50001 | ISO 17025 | ISO 13485 |
|---|---|---|---|---|---|---|---|---|---|---|
| Taiwan | 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 |
| Mexico | 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.

In addition, we have provided electronic manufacturing services since our acquisition of a controlling interest in Universal Scientific in February 2010. As a result of this, we face 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.

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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 next 30 years. For the years ended December 31, 2014, 2015 and 2016, we have made contributions in the amount of NT$100.0 million (US$3.1 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 2017 to contribute NT$100.0 million (US$3.1 million) through ASE Cultural and Educational Foundation in environmental projects in 2017.

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.

In December 2013, the Kaohsiung City Environmental Protection Bureau ordered us to suspend the operations at our K7 Plant's wafer-level process where nickel was used for alleged wastewater discharge violations and imposed a NT$110.1 million fine against us. The NT$110.1 million fine was later reduced to NT$109.4 million as ordered by the Kaohsiung City Environmental Protection Bureau. In December 2014, the Kaohsiung City Environmental Protection Bureau lifted the suspension order and approved the full resumption of operations of our K7 Plant after ordering a series of examinations, hearings and trial runs. In September 2015, the fine was further reduced to NT$102.0 million by the Kaohsiung City Environmental Protection Bureau and we received a refund of NT$7.3 million in October 2015. Although our K7 Plant has resumed full operation, we may be subject to other new environmental claims, charges or investigations of our K7 Plant or other facilities that may cause similar or more severe interruptions to our business and operations.

With respect to the NT$102.0 million administrative penalty imposed on us by the Kaohsiung City Environmental Protection Bureau, we appealed to the Kaohsiung High Administrative Court in August 2014 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 penalty. 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 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. The outcome of the proceeding cannot be predicted with certainty.

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. In September 2015, the Taiwan High Court Kaohsiung District Branch overturned the decision made by Kaohsiung District Court and

found the Company not guilty and repealed the criminal penalty imposed on the Company. 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.”

Our estimated environmental capital expenditures for 2017 will be approximately US$14.7 million, of which 13.9% will be used in climate change adaptation. In order to demonstrate our commitment to fulfill our corporate social responsibility toward 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, at minimum, to be made in the next 30 years.

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Climate Change Management

Climate change is a key corporate sustainability issue, and we are adapting local and international policies and taking firm actions to mitigate the emissions of greenhouse gases attributable to our business operations. We have also set up a Corporate Sustainability Committee (CSC) to better carry out sustainability efforts corresponding to the sustainability guidance and fulfill our commitments.

We strive to develop and promote a green concept in all facets of our enterprise. We are now committed to ensuring the protection of the earth through our efforts to reduce greenhouse gas emissions, waste and effluent. In addition, 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.

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.

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.

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Insurance

We have insurance policies covering property damage and damage to our production facilities, buildings and machinery. In addition, we have insurance policies covering our public and product liabilities. 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.

ORGANIZATIONAL STRUCTURE

The following chart illustrates our corporate structure including our principal manufacturing subsidiaries as of March 31, 2017. 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.

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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% of GAPT, now known as ASESH AT, in January 2007 for a purchase price of US$60.0 million. ASESH AT 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% of ASEN, formerly known as NXP Semiconductors Suzhou Ltd., from NXP Semiconductors for a purchase price of US$21.6 million. NXP Semiconductors holds the remaining 40.0% of ASEN. 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 ASESH 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.

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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.

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 March 31, 2017, we indirectly held 75.9% 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.

Furthermore, 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, 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. As of March 31, 2017, ASE Inc. indirectly held 75.7% of Universal Scientific. 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.

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, 2017.

| Facility | Location | Commencement of Operation | Primary Use | Approximate Floor Space (in sq. ft.) | Owned or Leased |
|---|---|---|---|---|---|
| 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. | 5,924,000 | 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 |

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| Facility | Location | Commencement of Operation | Primary Use | Approximate Floor Space (in sq. ft.) | Owned or Leased |
|---|---|---|---|---|---|
| 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. | 1,004,000 | 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 |
| ASE Shanghai | Shanghai, China | June 2004 | Design and production of semiconductor packaging materials. | 1,707,000 | 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. | 155,000 | Land and buildings: leased |

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| Facility | Location | Commencement of Operation | Primary Use | Approximate Floor Space (in sq. ft.) | Owned or 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. | 1,540,000 | 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 |
| USI Mexico | Guadalajara, Mexico | Acquired in February 2010 | Manufacturing site, which offer motherboard manufacture and system assembly. | 384,000 | Land: owned Buildings: owned |

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| Facility | Location | Commencement of Operation | Primary Use | Approximate Floor Space (in sq. ft.) | Owned or Leased |
|---|---|---|---|---|---|
| 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. | 1,513,000 | 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. | 400,000 | 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

In December 2013, the Kaohsiung City Environmental Protection Bureau ordered us to suspend the operations at our K7 Plant's wafer-level process where nickel was used for alleged wastewater discharge violations and imposed a NT$110.1 million fine against us. The NT$110.1 million fine was later reduced to NT$109.4 million as ordered by the Kaohsiung City Environmental Protection Bureau. In December 2014, the Kaohsiung City Environmental Protection Bureau lifted the suspension order and approved the full resumption of operations of our K7 Plant after ordering a series of examinations, hearings and trial runs. In September 2015, the fine was further reduced to NT$102.0 million by the Kaohsiung City Environmental Protection Bureau and we received a refund of NT$7.3 million in October 2015.

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With respect to the NT$102.0 million administrative penalty imposed on us by the Kaohsiung City Environmental Protection Bureau, we appealed to the Kaohsiung High Administrative Court in August 2014 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 penalty. 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 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. The outcome of the proceeding cannot be predicted with certainty.

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. In September 2015, the Taiwan High Court Kaohsiung District Branch overturned the decision made by Kaohsiung District Court and found the Company not guilty and repealed the criminal penalty imposed on the Company. 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, 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$256,591.4 million in 2014 to NT$283,302.5 million in 2015 and NT$274,884.1 million (US$8,484.1 million) in 2016.

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.

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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.

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 2014, 2015 and 2016, our depreciation, amortization and rental expense included in operating costs as a percentage of operating revenues was 9.9% ,10.0% and 10.3%, respectively. The increase in depreciation, amortization and rental expense as a percentage of operating revenues in 2016 compared to 2015 was primarily a result of a decrease 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.”

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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 2014, 2015 and 2016, raw material cost as a percentage of our operating revenues was 45.6% , 50.0% and 45.5%, respectively.

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 one of the principal raw materials we use in our packaging processes, and the recent volatility in the price of gold has affected our operating costs. In 2016, the spot rate for gold fluctuated from approximately US$1,073 per ounce to approximately US$1,370 per ounce according to the statistics published by The London Bullion Market Association. It may be difficult for us to adjust our average selling prices to account for fluctuations in the price of gold. We expect that gold wire will continue to be an important raw material for us and we therefore expect to continue to be subject to significant 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: 2012-2014 Cycle,* Amendments to IFRS 10, IFRS 12 and International Accounting Standard ("IAS") 28 *Investment Entities: Applying the Consolidation Exception*, Amendments to IFRS 11 *Accounting for Acquisitions of Interests in Joint Operatio*ns, Amendments to IAS 1 *Disclosure Initiative*, Amendments to IAS 16 and IAS 38 *Clarification of Acceptable Methods of Depreciation and Amortization.* 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, 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: 2014-2016 Cycl*e, Amendments to IFRS 2 *Classification and Measurement of Share-based Payment Transactions*, Amendments to IFRS 4 *Applying IFRS 9*

*Financial Instruments with IFRS 4 Insurance Contracts*, IFRS 9 *Financial Instruments*, Amendments to IFRS 9 and IFRS 7 *Mandatory Effective Date of IFRS 9 and Transition Disclosur*es, 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 IFRS 15 , IFRS 16 *Leases,* Amendments to IAS 7 *Disclosure Initiative*, Amendments to IAS 12 *Recognition of Deferred Tax Assets for Unrealized Losses*, Amendments to IAS 40 *Transfers of investment property* and IFRIC 22 *Foreign Currency Transactions and Advance Consideration.* We are currently evaluating 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*, Amendments to IFRS 15 *Clarifications to IFRS 15 "Revenue from Contracts with Customers"*, Amendments to IFRS 10 and IAS 28 *Sale or Contribution of Assets between an Investor and its Associate or Joint Venture* and IFRS 16 *Leases*.

Please refer to note 3 to our consolidated financial statements included in this annual report for more information.

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.

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***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.

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.

***Impairment of Accounts Receivable***. We periodically record a provision for doubtful accounts based on our evaluation of the collectability of our accounts receivable. We first assess whether objective evidence of impairment exists individually in each customer for account receivable, then includes in a group basis with historical collective experience and similar credit risk characteristics and collectively assess them for impairment. As of December 31, 2014, 2015 and 2016, the allowance we set aside for doubtful accounts was NT$84.1 million , NT$82.9 million and NT$53.7 million (US$1.7 million), respectively. Additional allowances may be required in the future if the financial condition of our customers or general economic conditions further deteriorate, and this additional allowance would reduce our net income.

***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. There may be significant changes in the net realizable value of inventories, since our estimate of demand in a specific time period may vary from the actual demand.

***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.

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***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 2014, 2015 and 2016, we recognized impairment losses of NT$297.8 million, NT$258.1 million and NT$888.2 million (US$27.4 million), respectively, on property, plant and equipment. See notes 14 and 23 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.

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 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.

For example, we acquired 33.29% shareholdings of SPIL in 2015 and 2016 and identified the differences between the cost of the investment and our share of the net fair value of SPIL's identifiable assets and liabilities in September 2016. We retrospectively adjusted the comparative financial statement for the year ended December 31,2015. See notes 13 to our consolidated financial statements included in this annual report.

***Goodwill***. Goodwill is 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. Goodwill is tested for impairment by comparing the carrying amount of the cash-generating unit to which the goodwill has been allocated to its recoverable amount. Recoverable amount is defined as the higher of a cash-generating unit's fair value less costs to sell or its value in use, which is defined as the present value of the expected future cash flows generated by the cash-generating unit. 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. As of December 31, 2016, we had goodwill of NT$10,558.9 million (US$325.9 million). We did not recognize any impairment loss in 2014, 2015 and 2016. Our conclusion could, however, change in the future if actual results differ from our estimates and judgments under different assumptions and conditions.

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***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 2014, 2015 and 2016, we recognized impairment losses of NT$10.4 million, nil and NT$91.9 million (US$2.8 million), respectively, on our investments. See note 23 to our consolidated financial statements included in this annual report.

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, | | |
|---|---|---|---|
| | 2014 | 2015 (Retrospectively Adjusted) | 2016 |
| Operating revenues | 100.0% | 100.0 % | 100.0% |
| Packaging | 47.3 | 41.2 | 45.6 |
| Testing | 10.1 | 8.9 | 9.8 |
| Electronic manufacturing services | 41.2 | 48.8 | 42.0 |
| Others | 1.4 | 1.1 | 2.6 |
| Operating costs | (79.1 ) | (82.3 ) | (80.6 ) |
| Gross profit | 20.9 | 17.7 | 19.4 |
| Operating expenses | (9.3 ) | (8.9 ) | (9.6 ) |
| Other operating income and expenses, net | 0.0 | (0.1 ) | (0.3 ) |
| Profit from operations | 11.6 | 8.7 | 9.5 |
| Non-operating expense, net | (0.5 ) | 0.1 | 0.7 |
| Profit before income tax | 11.1 | 8.8 | 10.2 |
| Income tax expense | (2.2 ) | (1.5 ) | (2.0 ) |
| Profit for the year | 8.9 % | 7.3 % | 8.2 % |
| Attributable to | | | |
| Owners of the Company | 8.7 % | 7.0 % | 7.8 % |
| Non-controlling interests | 0.2 | 0.3 | 0.4 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 8.9 | % | 7.3 | % | 8.2 | % |
| Other comprehensive income, net of income tax | 2.2 | | 0.0 | | (2.9 | ) |
| Total comprehensive income for the year | 11.1 | % | 7.3 | % | 5.3 | % |
| Attributable to | | | | | | |
| Owners of the Company | 10.7 | % | 7.0 | % | 5.1 | % |
| Non-controlling interests | 0.4 | | 0.3 | | 0.2 | |
| | 11.1 | % | 7.3 | % | 5.3 | % |

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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 31, | | |
|---|---|---|---|
| | 2014 | 2015 | 2016 |
| | (percentage of operating revenues) | | |
| Gross profit | | | |
| Packaging | 27.2% | 26.0% | 22.8% |
| Testing | 37.2 | 35.8 | 36.9 |
| Electronic manufacturing services | 8.6 | 6.8 | 9.7 |
| Overall | 20.9% | 17.7% | 19.4% |

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, | | |
|---|---|---|---|
| | 2014 | 2015 | 2016 |
| | (percentage of operating revenues) | | |
| Operating costs | | | |
| Raw materials | 45.6% | 50.0% | 45.5% |
| Labor | 13.0 | 12.3 | 13.0 |
| Depreciation, amortization and rental expense | 9.9 | 10.0 | 10.3 |
| Others | 10.6 | 10.0 | 11.8 |
| Total operating costs | 79.1% | 82.3% | 80.6% |
| Operating expenses | | | |
| Selling | 1.3 % | 1.3 % | 1.3 % |
| General and administrative | 4.0 | 3.8 | 4.2 |
| Research and development | 4.0 | 3.8 | 4.1 |
| Total operating expenses | 9.3 % | 8.9 % | 9.6 % |

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 (US$8,484.1 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 (US$3,866.8 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 (US$834.3 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 (US$3,561.6 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$53,194.2 million (US$1,641.8 million) in 2016 from NT$50,135.2 million in 2015. Our gross profit as a percentage of operating revenues, or gross margin, was 19.4% 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 (US$3,862.2 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 (US$1,098.4 million) compared to NT$34,720.4 million in 2015. As a percentage of operating revenues, labor cost increased to 13% in 2016 from 12.3% in 2015 primarily due to the decline of our operating revenues. Depreciation, amortization and rental expenses were NT$28,117.6 million (US$867.8 million) in 2016 compared to NT$28,191.8 million in 2015. As a percentage of operating revenues, depreciation, amortization and rental expenses increased to 10.3% 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.

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***Profit from operations***. Profit from operations increased 5.2% to NT$25,908.2 million (US$799.6 million) in 2015 compared to NT$24,633.1 million in 2015. Our profit from operations as a percentage of operating revenues, or operating margin, increased to 9.5% in 2016 from 8.7% in 2015 primarily due to an increase in gross margin. Operating expenses increased 4.9% to NT$26,485.7 million (US$817.5 million) 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 (US$359.9 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 (US$351.6 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 4.3% to NT$3,432.5 million (US$105.9 million) 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 (US$24.7 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.

***Non-Operating Expense, Net***. We had a net non-operating income of NT$2,116.9 million (US$65.4 million) in 2016 compared to a net non-operating income of NT$378.7 million (adjusted) 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 (US$73.3 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$1,512.2 million (US$46.7 million) 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 (US$0.8 million) in 2016.

***Net Profit***. Net profit, excluding non-controlling interests, increased 8.3% to NT$21,361.6 million (US$659.3 million) in 2016 compared to NT$19,732.1 million (adjusted) in 2015. Our diluted earnings per ADS decreased to NT$11.67 (US$0.36) 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 (US$166.4 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.

Year ended December 31, 2015 Compared to Year Ended December 31, 2014

***Operating Revenues***. Operating revenues increased 10.4% to NT$283,302.5 million in 2015 from NT$256,591.4 million in 2014, primarily due to an increase in revenues from our electronic manufacturing services business. Packaging revenues decreased 3.9% to NT$116,607.3 million in 2015 from NT$121,336.5 million in 2014. Testing revenues decreased 2.6% to NT$25,191.9 million in 2015 from NT$25,874.7 million in 2014. Revenues from our electronic manufacturing services business increased 30.7% to NT$138,242.1 million in 2015 from NT$105,784.4 million in 2014. The decrease in packaging and testing revenues was primarily due to slightly soft demand in the end-application market. The increase in the revenues from our electronic manufacturing services business was primarily due to an increase in the outsourced orders for communications and consumer products.

***Gross Profit***. Gross profit decreased 6.4% to NT$50,135.2 million in 2015 from NT$53,588.5 million in 2014. Our gross profit as a percentage of operating revenues, or gross margin, was 17.7% in 2015 compared to 20.9% in 2014. The decrease was primarily due to the growth in our electronic manufacturing services business with a lower gross margin. Raw material costs in 2015 were NT$141,778.8 million compared to NT$116,998.6 million in 2014. As a percentage of operating revenues, raw material costs increased to 50.0% in 2015 from 45.6% in 2014 primarily due to an increase in orders in our electronic manufacturing services business, which required relatively higher raw material costs compared to our other businesses. Depreciation, amortization and rental expenses were NT$28,191.8 million in 2015 compared to NT$25,386.7 million in 2014. As a percentage of operating revenues, depreciation, amortization and rental expenses increased to 10.0% in 2015 from 9.9% in 2014 due to a decrease in our packaging and testing revenues. Labor cost in 2015 was NT$34,720.4 million compared to NT$33,243.2 million in 2014. As a percentage of operating revenues, labor cost decreased to 12.3% in 2015 from 13.0% in 2014 primarily due to the growth of our operating revenues. Our gross margin for our packaging business decreased to 26.0% in 2015 from 27.2% in 2014 due to an increase in labor costs and depreciation expenses as a percentage of packaging revenue, partially offset by a decrease in raw material costs as a percentage of packaging revenues. Our gross margin for our testing business decreased to 35.8% in 2015 from 37.2% in 2014 primarily due to an increase in depreciation expenses as a percentage of testing revenues. Our gross margin for our electronic manufacturing services business decreased to 6.8% in 2015 from 8.6% in 2014 primarily due to an increase in the sale of products with lower gross margins.

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***Profit from operations***. Profit from operations decreased 17.5% to NT$24,633.1 million in 2015 compared to NT$29,874.5 million in 2014. Our profit from operations as a percentage of operating revenues, or operating margin, decreased to 8.7% in 2015 from 11.6% in 2014 primarily due to a decrease in gross margin. Operating expenses increased 5.5% to NT$25,250.6 million in 2015 compared to NT$23,942.7 million in 2014. 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 5.0% to NT$10,724.6 million in 2015 from NT$10,214.8 million in 2014, primarily due to the professional service fees incurred from our strategic investments in 2015, including that incurred for the Initial SPIL Tender Offer and Second SPIL Tender Offer. General and administrative expense as a percentage of our operating revenues was 3.8% in 2015, compared to 4.0% in 2014. Research and development expense increased 6.3% to NT$10,937.5 million, accounting for 3.8% of operating revenues in 2015, compared to NT$10,289.7 million, accounting for 4.0% of operating revenues in 2014. This increase in the research and development expense was primarily due to an increase in salary expenses from increased headcounts. Selling expense increased 4.4% to NT$3,588.5 million in 2015 from NT$3,438.2 million in 2014. This increase was primarily due to an increase in salary and bonus expenses primarily due to salary raises. Selling expense as a percentage of operating revenues was 1.3% in both 2015 and 2014. We had a net other operating expense of NT$251.5 million in 2015 compared to a net other operating income of NT$228.7 million in 2014. The increase in net other operating expense was primarily due to (i) the reversal of the settlement with Tessera in relation to patent infringement claims in the amount of US$3.0 million in the fourth quarter of 2014 due to the reduction of the final settlement amount from US$30.0 million to US$27.0 million and (ii) the receipt of direct reimbursement from Citibank, N.A., the depositary bank for our ADR programs, in the amount of US$4.1 million (net of U.S. withholding tax) in 2014.

***Non-Operating Expense, Net***. We had a net non-operating income of NT$378.7 million (adjusted) in 2015 compared to a net non-operating expense of NT$1,339.4 million in 2014. This increase was primarily due to (i) an increase in non-operating income due to the change in the net gain/loss on valuation of financial assets and liabilities and net foreign exchange gain/loss which resulted in an increase in net gain from NT$616.9 million in 2014 to NT$1,759.6 million in 2015, (ii) an increase in non-operating income due to the increase in the income earned from equity method investments from the loss of NT$121.9 million in 2014 to the profit of NT$126.2 million (adjusted) in 2015 and (iii) an increase in non-operating income due to an increase in dividends income from NT$101.3 million in 2014 to NT$397.0 million in 2015.

***Net Profit***. Net profit, excluding non-controlling interests, decreased 11.2% to NT$19,732.1 million (adjusted) in 2015 compared to NT$22,228.6 million in 2014. Our diluted earnings per ADS decreased to NT$12.38 in 2015 compared to diluted earnings per ADS of NT$13.93 in 2014. Our income tax expense decreased 23.9% to NT$4,311.1 million in 2015 compared to NT$5,666.0 million in 2014, primarily due to a decrease in the income tax on undistributed earnings.

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.

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| | Quarter Ended | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Mar. 31, 2015 NT$ (in millions) | Jun. 30, 2015 NT$ | Sept. 30, 2015 NT$ | Dec. 31, 2015 NT$ | Mar. 31, 2016 NT$ | Jun. 30, 2016 NT$ | Sept. 30, 2016 NT$ | Dec. 31, 2016 NT$ |
| Consolidated Operating Revenues | | | | | | | | |
| Packaging | 29,320.9 | 28,617.8 | 29,575.1 | 29,093.5 | 28,036.1 | 30,177.6 | 33,448.6 | 33,620.5 |
| Testing | 6,179.5 | 6,230.8 | 6,425.7 | 6,355.9 | 5,995.3 | 6,502.1 | 7,231.5 | 7,302.9 |
| Electronic manufacturing services | 28,300.1 | 34,534.0 | 36,107.2 | 39,300.8 | 24,748.8 | 24,845.3 | 31,174.4 | 34,626.6 |
| Others | 861.6 | 839.2 | 762.4 | 798.0 | 3,590.9 | 1,075.7 | 929.2 | 1,578.6 |
| Total | 64,662.1 | 70,221.8 | 72,870.4 | 75,548.2 | 62,371.1 | 62,600.7 | 72,783.7 | 77,128.6 |
| Consolidated Gross Profit | | | | | | | | |
| Packaging | 7,543.2 | 7,226.2 | 7,809.7 | 7,769.4 | 5,579.4 | 6,711.6 | 7,750.8 | 8,482.7 |
| Testing | 2,121.7 | 2,190.7 | 2,321.6 | 2,391.7 | 1,971.0 | 2,395.6 | 2,809.9 | 2,804.1 |
| Electronic manufacturing services | 2,238.3 | 1,779.7 | 2,567.5 | 2,847.9 | 1,996.6 | 2,533.2 | 3,113.2 | 3,591.8 |
| Others | 410.2 | 368.7 | 288.8 | 259.9 | 1,902.3 | 614.5 | 439.0 | 498.5 |
| Total | 12,313.4 | 11,565.3 | 12,987.6 | 13,268.9 | 11,449.3 | 12,254.9 | 14,112.9 | 15,377.1 |
| Consolidated Gross Profit (%) | | | | | | | | |
| Packaging | 25.7 % | 25.3 % | 26.4 % | 26.7 % | 19.9 % | 22.2 % | 23.2 % | 25.2 % |
| Testing | 34.3 | 35.2 | 36.1 | 37.6 | 32.9 | 36.8 | 38.9 | 38.4 |
| Electronic manufacturing services | 7.9 | 5.2 | 7.1 | 7.2 | 8.1 | 10.2 | 10.0 | 10.4 |
| Overall | 19.0 % | 16.5 % | 17.8 % | 17.6 % | 18.4 % | 19.6 % | 19.4 % | 19.9 % |

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

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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 on January 2006 and was amended in August 2012, when the amount of the regular income tax calculated pursuant to the AMT Act 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.

As of December 31, 2016, 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 2022, 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, 2014, 2015 and 2016 were NT$623.7 million, NT$538.0 million and NT$700.3 million (US$21.6 million), respectively. The effect of such tax exemption on basic earnings per share for the year ended December 31, 2014, 2015 and 2016 were NT$0.08, NT$0.07and, NT$0.09 (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 ROC Income Tax Act, 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. However, 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.

In 2015, our effective income tax rate decreased to 17% from 20% in 2014 primarily due to a decrease in undistributed earnings tax. 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. We believe that our future estimated taxable income will be sufficient to utilize our deferred tax assets recorded as of December 31, 2016.

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, 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.

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Net cash provided by operating activities amounted to NT$52,107.9 million (US$1,608.3 million) in 2016 primarily as a result of (i) our operation performance with profit before income tax of NT$28,025.1 million (US$865.0 million) and (ii) our non-cash depreciation and amortization in the amount of NT$29,422.3 million (US$908.1 million). 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 (adjusted) and (ii) our non-cash depreciation and amortization in the amount of NT$29,518.7 million. Net cash provided by operating activities amounted to NT$45,863.5 million in 2014, primarily as a result of (i) our operation performance with profit before income tax of NT$28,535.1 million and (ii) our non-cash depreciation and amortization in the amount of NT$26,350.8 million. 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. The increase in net cash provided by operating activities in 2015 compared to 2014 was primarily due to cash inflows from a decrease in trade receivables, partially offset by cash outflows from a decrease in trade payables.

Net cash used in investing activities amounted to NT$ 43,159.5 million (US$ 1,332.1 million) in 2016 primarily due to our acquisition of property, plant and equipment of NT$ 26,714.2 million (US$ 824.5 million) and our acquisition of associates and joint ventures of NT$ 16,041.5 million (US$ 495.1 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 investing activities amounted to NT$38,817.9 million in 2014, primarily due to our acquisition of property, plant and equipment of NT$39,599.0 million.

Net cash used in financing activities amounted to NT$21,087.0 million (US$650.8 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 (US$377.9 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 (US$173.8 million); (iii) decrease in non-controlling interests in the amount of NT$3,063.6 million (US$94.6 million) due to Universal Scientific's restructuring; and (iv) the net repayment of bonds payable in the amount of NT$1,365.1 million (US$42.1 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. Net cash used in financing activities amounted to NT$2,797.0 million in 2014. This amount reflected primarily (i) our net repayment of short-term borrowings and long-term bank loans in the amount of NT$12,389.7 million; and (ii) our distributed cash dividends to owners of the Company in the amount of NT$9,967.2 million, partially offset by (i) our net proceeds from issue of bonds of NT$8,158.8 million; and (ii) change in non-controlling interests of NT$9,905.7 million due to Universal Scientific Shanghai's capital increase.

As of December 31, 2016, our primary source of liquidity was NT$38,392.5 million (US$1,185.0 million) of cash and cash equivalents and NT$3,336.5 million (US$103.0 million) of financial assets—current. Our financial assets—current primarily consisted of structured time deposits and swap contracts. As of December 31, 2016, we had total unused credit lines of NT$176,185.0 million (US$5,437.8 million). As of December 31, 2016, we had working capital of NT$35,820.1 million (US$1,105.6 million).

As of December 31, 2016, we had total borrowings of NT$111,651.5 million (US$3,446.0 million), of which NT$20,955.5 million (US$646.8 million) were short-term debts and NT$90,696.0 million (US$2,799.2 million) were long-term debts. In 2016, the maximum amount of our short-term debts was NT$45,182.1 million (US$1,394.5 million) and the average amount of our short-term debts was NT$32,688.7 million (US$1,008.9 million). The fluctuation was primarily because our working capital balance fluctuated during 2016 from time to time. The annual interest rate for borrowings under our short-term bank loans and bills payable ranged from 0.70% to 8.99% as of December 31, 2016. 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, 2016, we had outstanding long-term debts, less current portion, of NT$74,354.9 million (US$2,294.9 million). As of December 31, 2016, the current portion of our long-term debts was NT$16,341.1 million (US$504.3million). Our long-term bank loans and bills payable typically carried variable annual interest rates which ranged between 0.74% to 5.39% as of December 31, 2016. For the maturity information and interest rates by currencies, see “Item 11—Quantitative and Qualitative Disclosures about Market Risk—Market Risk—Interest Rate Risk.”

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We have pledged a portion of our assets, with a carrying value of NT$17,033.3 million (US$525.7 million) as of December 31, 2016, 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 ASESH 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 Capital Increase and cash dividend distribution. As of the date of this annual report, the conversion price is NT$28.96 per common share. The bonds will mature on September 5, 2018, unless previously repurchased or converted in accordance with their terms prior to such date. We used the net proceeds to fund procurement of raw materials from overseas. Please refer to note 19 of our consolidated financial statements included in this annual report for more information. As of December 31, 2016, the balance of the outstanding convertible bonds was US$400.0 million.

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 Green Bonds will mature on July 24, 2017 unless previously redeemed or repurchased and cancelled. The net proceeds from the Green

Bonds offering were used to fund projects that promote our transition to low-carbon and climate-resilient growth.

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$49.48 per common share. The bonds will mature on March 27, 2018, unless previously repurchased or converted in accordance with their terms prior to such date. We used the net proceeds to fund procurement of equipment from overseas. Please refer to note 19 of our consolidated financial statements included in this annual report for more information. As of December 31, 2016, the balance of the outstanding convertible bonds was US$200.0 million.

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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$114.2 million) 1.25% unsecured corporate bonds with five year term and NT$4,300.0 million (US$132.7 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 (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 “Capital Increase”). A total of 300,000,000 of our common shares were offered under the Capital Increase, which were fully subscribed and raised NT$10,290.0 million (US$317.6 million). The net proceeds of the 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, 2016, NT$9,223.5 million (US$284.7 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, 2016, 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.”

Our contingent obligations consist of guarantees provided by us to our subsidiaries. As of December 31, 2016, we endorsed and guaranteed the bonds issued by our subsidiaries, Anstock II Limited, in the amount of US$306.4 million. Other than such guarantees, we have no other contingent obligations.

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.

| | Year Ended December 31, | | | |
|---|---|---|---|---|
| | 2014 | 2015 | 2016 | |
| | NT$ | NT$ | NT$ | US$ |
| | (in millions) | | | |
| Machinery and equipment | 31,735.5 | 18,318.4 | 21,978.3 | 678.3 |
| Building and improvements | 11,713.1 | 9,962.4 | 5,702.6 | 176.0 |
| Total | 43,448.6 | 28,280.8 | 27,680.9 | 854.3 |

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We had commitments for capital expenditures of approximately US$204.7 million, of which US$20.6 million had been paid as of December 31, 2016, primarily in connection with the expansion of our packaging and testing services operations. We estimate that our environmental capital expenditures for 2017 will be approximately US$14.7 million, of which 13.9% 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, 2016, we had contractual obligations of NT$83,793.3 million (US$2,586.2 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 32 to our consolidated financial statements included in this annual report.

RESEARCH AND DEVELOPMENT

For 2014, 2015 and 2016, our research and development expenditures totaled approximately NT$10,289.7 million, NT$10,937.5 million and NT$ 11,391.1 million (US$351.6 million), respectively. These expenditures represented approximately 4.0%, 3.8% and 4.1% of operating revenues in 2014, 2015 and 2016, respectively. We have historically expensed all research and development costs as incurred and none is currently capitalized. As of January 2017, we employed 7,495 employees in research and development.

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.

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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 software and solutions, including logic/mixed-signal/RF/(2.5D/3D) module and SiP /discrete semiconductors, 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, industrial, automotive, and 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, 2016 to December 31, 2016 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.

TABULAR DISCLOSURE OF CONTRACTUAL OBLIGATIONS

The following table sets forth the maturity of our contractual obligations as of December 31, 2016.

| | 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[1] | 93,736.4 | 17,353.4 | 63,468.2 | 9,123.8 | 3,791.0 |
| Capital lease obligations[2] | 581.9 | 116.4 | 98.0 | 367.5 | - |
| Operating leases[3] | 1,078.4 | 284.2 | 237.9 | 117.8 | 438.5 |
| Purchase obligations[4] | 2,208.7 | 2,208.7 | - | - | - |
| Total[5][6][7][8] | 97,631.9 | 19,964.4 | 63,828.9 | 9,609.1 | 4,229.5 |

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(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 35 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, 2016. See note 35 to our consolidated financial statements included in this annual report. Total commitments for construction of buildings were approximately NT$2,718.4 million (US$83.9 million), of which NT$509.7 million (US$15.7 million) had been paid as of December 31, 2016.

(5) Excludes non-binding commitments to purchase machinery and equipment of approximately NT$3,912.5 million (US$120.8 million), of which NT$158.8 million (US$4.9 million) had been paid as of December 31, 2016. See note 35 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$1,574.8 million (US$48.6 million) as of December 31, 2016, since the schedule of payments is difficult to determine. See note 35 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$807.2 million (US$24.9 million) in 2016, and we estimate that we will contribute approximately NT$521.3 million (US$16.1 million) in 2017. See note 21 to our consolidated financial statements included in this annual report.

(8) Excludes uncertain tax liabilities. We recognized additional taxes payable of NT$ 552.5 million (US$17.1 million) and accrued interest and penalties of NT$16.3 million (US$0.5 million) related to uncertain tax positions as of or for the year ended December 31, 2016. 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.

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.

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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 an 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 March 31, 2017. 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.

| Name | Position | Director Since | Age | Other Significant Positions Held Outside of the ASE Group |
|---|---|---|---|---|
| Jason C.S. Chang[1][2] | Director, Chairman and Chief Executive Officer | 1984 | 72 | None |
| Richard H.P. Chang[1] | Director, Vice Chairman and President | 1984 | 70 | Chairman, Sino Horizon Holdings Ltd. |
| Rutherford Chang [3] | Director and General Manager of China Region | 2009 | 37 | None |
| Tien Wu[2] | Director and Chief Operating Officer | 2003 | 59 | None |
| Joseph Tung[2] | Director and Chief Financial Officer | 1997 | 58 | Independent director, Ta Chong Bank Ltd. |
| Raymond Lo[2] | Director and General Manager, Kaohsiung packaging facility | 2006 | 63 | None |
| Tien-Szu Chen [2] | Director and General Manager, ASE Inc. Chung-Li branch | 2015 | 55 | None |
| Jeffrey Chen[2] | Director and General Manager of China Headquarters | 2003 | 53 | None |
| Shen-Fu Yu | Independent Director and Member, Audit Committee and Compensation Committee | 2009 | 72 | Director, Arima Lasers Corporation; supervisor, Dynapak International Technology Corporation, San Fu Chemical Co., Ltd., and Arima Communications |
| Ta-Lin Hsu | | 2009 | 73 | |

| | | | | |
|---|---|---|---|---|
| | Independent Director and Member, Audit Committee and Compensation Committee | | | Chairman and founder, H&Q Asia Pacific; Chairman, H&Q Taiwan Co. Ltd. |
| Mei-Yueh Ho | Independent Director and Member, Audit Committee | 2015 | 66 | Independent Director, Bank of Kaohsiung, Ltd., KINPO Electronics Inc., AU Optronics Corp. and Ausnutria Dairy Corporation Ltd. |

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

(2) Representative of ASE Enterprises Limited, a company organized under the laws of Hong Kong, which held 16.54% of our total outstanding shares as of March 31, 2017. All of the outstanding shares of ASE Enterprises 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."

Executive Officers

The following table sets forth information regarding all of our executive officers as of March 31, 2017.

| Name | Position | Years with the Company | Age |
|---|---|---|---|
| Jason C.S. Chang | Chairman and Chief Executive Officer | 33 | 72 |
| Richard H.P. Chang | Vice Chairman and President; Chairman, Universal Scientific Shanghai | 33 | 70 |
| Rutherford Chang | General Manager, China Region | 12 | 37 |
| Tien Wu | Chief Operating Officer | 17 | 59 |
| Joseph Tung | Chief Financial Officer | 22 | 58 |
| Raymond Lo | General Manager, ASE Test Taiwan; General Manager, Kaohsiung packaging facility | 30 | 63 |
| Tien-Szu Chen | General Manager, ASE Inc. Chung-Li branch | 28 | 55 |
| Chun-Che Lee | General Manager, ASE Electronics | 32 | 57 |
| Songwoon Kim | General Manager, ASE Korea | 32 | 58 |
| Ung Bae | General Manager, ASE Korea (retired in February 2017) | 17 | 60 |
| | General Manager, ASE Japan and Wuxi Tongzhi | 17 | 52 |

| | | | |
|---|---|---|---|
| Chih-Hsiao Chung | | | |
| Chiu-Ming Cheng | General Manager, ASESH AT | 26 | 56 |
| Chih-An Hsu | General Manager, ASEKS | 20 | 54 |
| Yen-Chieh Tsao | General Manager, ASEWH | 5 | 59 |
| Shih-Kang Hsu | Chief Executive Officer, ASEN | 16 | 51 |
| Meng-Hui Lin | General Manager, ASE Shanghai | 23 | 50 |
| Kwai Mun Lee | President, ASE South-East Asia operations | 18 | 54 |
| Lid Jian Chiou | General Manager, ASE Singapore Pte. Ltd. | 13 | 60 |
| Heng Ee Ooi | General Manager, ASE Malaysia | 22 | 48 |
| Kenneth Hsiang | General Manager, ISE Labs | 17 | 47 |
| Chen-Yen Wei | Chairman, Universal Scientific; Chairman, USI Inc.; President, Universal Scientific Shanghai | 37 | 62 |
| Feng-Ta Chen | General Manager, UGJQ | 19 | 54 |
| Jack Hou | General Manager, UGTW | 23 | 60 |
| Ta-I Lin | General Manager, UGKS | 29 | 53 |
| Yueh-Ming Lin | General Manager, USISZ | 21 | 51 |
| Omar Anaya Galván | General Manager, USI Mexico | 14 | 47 |

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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 is also an independent director of Ta Chong Bank Ltd. since October 2007. 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.

*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. 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 a supervisor of Dynapack International Technology Corporation, San Fu Chemical Co., Ltd., and Arima Communications. Mr. Yu is also a member of the audit committee and compensation committee of ASE Inc. Mr. Yu also serves on the compensation committee of Elite Material Co., Ltd. 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.

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*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 Diary Corporation Ltd. She is also a member of the compensation committee of the Bank of Kaohsiung, Ltd., KINPO Electronics Inc. and Ausnutria Diary 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.

*Ung Bae* served as General Manager of ASE (Korea) Inc. from July 2008 to February 2017, after serving as Senior Vice President of ASE (Korea) Inc. since July 1999, and retired in February 2017. Mr. Bae was Vice President of Motorola Korea, Limited before joining ASE (Korea) Inc. when we acquired Motorola Korea, Limited. He holds a degree in electronic engineering from In-Ha 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.

*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.

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*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.

*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 Senior Director of Global Operation Management (Shenzhen) Division of USI Electronics (Shenzhen) Co. Ltd. since March 2014. 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.

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

COMPENSATION

In 2016, we recorded expenses of approximately NT$806.8 million (US$24.9 million) as remuneration to our directors and executive officers. We did not pay any remuneration in kind to our directors or executive officers in 2016. In 2016, we accrued pension costs of NT$6.9 million (US$0.2 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$0.09 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 21 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$1,587.3 million, NT$2,335.6 million and NT$ 2,033.8 million (US$62.8 million) as cash bonus to our employees in 2014, 2015 and 2016, respectively.

We currently maintain three option plans, adopted in 2007, 2010 and 2015. The option plan adopted in 2004 expired in May 2015. 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 equal to (for the 2007 plan), or not less than (for the 2010 and 2015 plans), 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. As of December 31, 2016, a total of 185,806,000 options had been

granted under the 2007 plan. The original exercise price under the 2007 plan was NT$30.65 per share (currently adjusted to NT$21.1 per share). As of December 31, 2016, 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, 2016, 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.

ASE Mauritius Inc. Share Option Plan

As of December 31, 2016, 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, 2016, a total of 30,000,000 options had been granted under this plan with an exercise price of US$1.7.

USI Enterprise Limited Share Option Plans

As of December 31, 2016, 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, 2016, we had 11,958,500 options outstanding with an exercise price of US$1.53 per share, 6,561,340 options outstanding with an exercise price of US$2.42 per share and 7,413,000 options outstanding with an exercise price of US$2.94 per share under these three plans respectively.

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***Universal Scientific Shanghai Option Plans***

As of December 31, 2016, 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, 2016, we had 24,997,000 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, | | |
|---|---|---|---|
| | 2014 | 2015 | 2016 |
| Total | 68,100 | 65,789 | 66,711 |
| Function | | | |
| Direct labor | 38,588 | 35,770 | 36,574 |
| Indirect labor (manufacturing) | 16,620 | 16,910 | 16,724 |

| | | | |
|---|---|---|---|
| Indirect labor (administration) | 5,941 | 5,929 | 5,927 |
| Research and development | 6,951 | 7,180 | 7,486 |
| Location | | | |
| Taiwan | 35,382 | 34,877 | 35,763 |
| PRC | 24,223 | 22,475 | 22,369 |
| Korea | 2,900 | 2,701 | 2,662 |
| Malaysia | 2,752 | 2,982 | 3,230 |
| Japan | 588 | 502 | 490 |
| Singapore | 1,059 | 986 | 869 |
| United States | 383 | 379 | 392 |
| Others | 813 | 887 | 936 |

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 March 31, 2017. Percentage of beneficial ownership is based on 8,273,546,046 common shares outstanding as of March 31, 2017.

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| Director or Executive Officer | Number of ASE Inc. Common Shares Beneficially Held[1] | Percentage of ASE Inc. Total Common Shares Issued and Outstanding | Number of Options Exercisable[2] | Exercise Price of Options (NT$) | Expiration Date of Options |
|---|---|---|---|---|---|
| Jason C.S. Chang | 1,889,032,057[3] | 22.83 % | 0 | - | - |
| Richard H. P. Chang | 234,463,779 | 2.83 % | 9,050,000 | 20.40-21.10 | 2017/12/19 - 2020/5/6 |
| 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 | * | - | - | - |
| Ta-Lin Hsu | 0 | 0 | - | - | - |
| Mei-Yueh Ho | 0 | 0 | - | - | - |
| Chun-Che Lee | 3,344,502 | * | * | 20.40-21.10 | 2017/12/19 - 2020/5/6 |
| Songwoon Kim | 0 | 0 | * | 20.40 | 2020/5/6 |
| Chih-Hsiao Chung | 130,979 | * | * | 20.40-21.10 | 2017/12/19 - 2020/5/6 |
| Chiu-Ming Cheng | 638,621 | * | * | 20.40-21.10 | 2017/12/19 - 2020/5/6 |
| Chih-An Hsu | 120,000 | * | 0 | - | - |
| Yen-Chieh Tsao | 0 | 0 | 0 | 36.50 | 2025/9/10 |
| Shih-Kang Hsu | 260,000 | * | * | 20.40 | 2020/5/6 |
| Meng-Hui Lin | 350,940 | * | * | 20.40-21.10 | 2017/12/19 - 2020/5/6 |
| Kwai Mun Lee | 0 | 0 | * | 20.40 | 2020/5/6 |
| Lid Jian Chiou | 0 | 0 | * | 20.40-21.10 | 2017/12/19 - 2020/5/6 |
| Heng Ee Ooi | 0 | 0 | 0 | - | - |
| Kenneth Hsiang | 155,000 | * | * | 20.40-21.10 | 2017/12/19 - 2020/5/6 |
| Chen-Yen Wei | 710,053 | * | - | - | - |
| Feng-Ta Chen | 0 | 0 | - | - | - |
| Jack Hou | 90,917 | * | - | - | - |
| Ta-I Lin | 0 | 0 | - | - | - |
| Yueh-Ming Lin | 5,000 | * | - | - | - |
| Omar Anaya Galvan | 0 | 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 407,449,072 common shares beneficially owned through Value Tower Limited, respectively, and 112,927,212 common shares Jason C.S. Chang directly owned. 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.

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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 March 31, 2017, 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 8,273,546,046 common shares outstanding as of March 31, 2017. 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.

| | Common Shares Beneficially Owned | |
|---|---|---|
| Name of Shareholder or Group | Number | Percentage |
| Jason C.S. Chang[(1)] | 1,889,032,057 | 22.83 % |

(1) 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 407,449,072 common shares through Value Tower Limited, respectively, and directly owned 112,927,212 common shares. As a result, Jason C.S. Chang beneficially owned 1,889,032,057 common shares, representing 22.83% of our total outstanding shares (based on 8,273,546,046 common shares as of March 31, 2017). 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 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 2014, 2015 and 2016.

The following table sets forth information relating to our common shares held directly by our consolidated subsidiaries and our equity method investee as of March 31, 2017.

| | Common Shares Beneficially Owned | |
|---|---|---|
| Name of Shareholder | Number | Percentage |
| ASE Test[1] | 88,200,472 | 1.07 % |
| ASE Test Taiwan[2] | 10,978,776 | 0.13 % |
| J&R Holding Limited[3] | 46,703,763 | 0.56 % |
| Hung Ching[4] | 88,261,502 | 1.07 % |

(1) 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."

(2) 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 March 31, 2017. See "—Related Party Transactions."

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(3) 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.

(4) Hung Ching is our equity method investee. As of March 31, 2017, 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 March 31, 2017, 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 2014, 2015 and 2016.

As of March 31, 2017, a total of 8,273,546,046 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 March 31, 2017, 540,454,720 common shares were registered in the name of a nominee of Citibank, N.A., the depositary under our ADS deposit agreement. Citibank, N.A., has advised us that, as of March 31, 2017, 108,090,653 ADSs, representing 540,453,265 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 March 31, 2017 and the trust established to hold the common shares issued to ASE Test held 88,200,472 of our common shares.

We have historically provided promissory notes as guarantees to some of our subsidiaries. As of December 31, 2016, we endorsed and guaranteed the bonds issued by our subsidiaries, Anstock II Limited, in the amount of US$306.4 million.

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.

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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, 2014, 2015 and 2016, we have made contributions in the amount of NT$100.0 million (US$3.1 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 2017 to contribute NT$100.0 million (US$3.1 million) through ASE Cultural and Educational Foundation in environmental projects in 2017.

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 (US$27.0 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 (US$12.5 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$219,843.7 ,NT$250,671.4 million and NT$236,015.4 million (US$7,284.4 million) in 2014, 2015 and 2016, respectively, which contributed 85.7% , 88.5% and 85.6 % 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.

Legal Proceedings

K7 Plant Wastewater Discharge

In December 2013, the Kaohsiung City Environmental Protection Bureau ordered us to suspend the operations at our K7 Plant’s wafer-level process where nickel was used for alleged wastewater discharge violations and imposed a NT$110.1 million fine against us. The NT$110.1 million fine was later reduced to NT$109.4 million as ordered by the Kaohsiung City Environmental Protection Bureau. In December 2014, the Kaohsiung City Environmental Protection Bureau lifted the suspension order and approved the full resumption of operations of our K7 Plant after ordering a series of examinations, hearings and trial runs. In September 2015, the fine was reduced to NT$102.0 million by the Kaohsiung City Environmental Protection Bureau and we received a refund of NT$7.3 million in October 2015.

With respect to the NT$102.0 million administrative penalty imposed on us by the Kaohsiung City Environmental Protection Bureau, we appealed to the Kaohsiung High Administrative Court in August 2014 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 penalty. 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 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. The outcome of the proceeding cannot be predicted with certainty.

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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. In September 2015, the Taiwan High Court Kaohsiung District Branch overturned the decision made by Kaohsiung District Court and found the Company not guilty and repealed the criminal penalty imposed on the Company. 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."

***SPIL Litigation Against ASE***

On October 15, 2015, in connection with the Initial SPIL Tender Offer, SPIL filed a lawsuit in the Kaohsiung District Court against ASE requesting that the court invalidate the Initial SPIL Tender Offer and confirm that ASE does not have the right to be registered as a shareholder of SPIL. The lawsuit alleged that the Initial SPIL Tender Offer violate certain provisions of the ROC Securities and Exchange Act and certain provisions of the ROC Fair Trade Act and because of these violations the Initial SPIL Tender Offer should be voided. Following a series of pleadings and arguments on the amount of verdict fee that SPIL has to post before the case could be heard, the Kaohsiung District Court ordered SPIL to post a verdict fee in the amount of NT$219.2 million (US$6.7 million) and scheduled a hearing on April 29, 2016. SPIL appealed the Kaohsiung District Court's decision on the verdict fee to the Kaohsiung High Court, and, following the Kaohsiung High Court's decision to sustain the Kaohsiung District Court's decision on the amount of the verdict fee, SPIL appealed to the Supreme Court of Taiwan on January 18, 2016. On June 27, 2016, the Kaohsiung District Court dismissed the lawsuit due to SPIL's failure to pay relevant court expenses by the deadline.

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. On March 30, 2017, our board of directors adopted resolutions to pay

cash dividends of NT$1.40 per share based on 8,153,712,546 shares, which equal to the number of issued shares shown in the shareholders' roster as of March 28, 2017 minus the number of shares repurchased by us as treasury stocks. This proposal is subject to shareholders' approval at the annual general shareholders meeting in June 2017 and the actual cash dividends per share will be adjusted by any fluctuations in the number of our shares due to, for example, the exercise of share options.

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[1] | Total Common Shares Issued as Stock Dividends | Outstanding Common Shares on Record Date[2] | Percentage of Outstanding Common Shares Represented by Stock Dividends | |
|---|---|---|---|---|---|---|---|
| | NT$ | | NT$ | | | | |
| 2009 | 0.50 | | - | - | 5,474,320,814 | - | |
| 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 | - | |

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(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$0.09 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.

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.

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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 March 31, 2017, there were an aggregate of 8,273,546,046 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 April 14, 2017 was NT$37.85 per share.

| | Closing Price per Share | | Adjusted Closing Price per Share[(1)] | | Average Daily Trading Volume (in thousands of shares) | Taiwan Stock Exchange Index | |
|---|---|---|---|---|---|---|---|
| | High | Low | High | Low | | High | Low |
| | NT$ | NT$ | NT$ | NT$ | | | |
| 2012 | 31.10 | 20.15 | 20.77 | 12.79 | 24,667 | 8,144.0 | 6,894.7 |
| 2013 | 30.65 | 23.60 | 25.76 | 17.66 | 24,598 | 8,623.4 | 7,616.6 |
| 2014 | 41.00 | 26.80 | 36.11 | 21.91 | 25,609 | 9,569.2 | 8,264.5 |
| 2015 | 47.75 | 30.00 | 44.15 | 28.40 | 28,467 | 9,973.1 | 7,410.3 |
| First Quarter | 47.75 | 36.65 | 44.15 | 33.05 | 31,837 | 9,758.1 | 9,048.3 |
| Second Quarter | 46.65 | 39.70 | 43.05 | 36.10 | 29,672 | 9,973.1 | 9,189.8 |
| Third Quarter | 42.10 | 30.00 | 38.50 | 28.40 | 33,371 | 9,379.2 | 7,410.3 |
| Fourth Quarter | 39.00 | 33.40 | 37.40 | 31.80 | 19,731 | 8,857.0 | 8,040.2 |
| 2016 | 39.60 | 28.65 | 39.05 | 27.05 | 17,859 | 9,392.7 | 7,664.0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| First Quarter | 38.30 | 33.75 | 36.70 | 32.15 | 17,321 | 8,812.7 | 7,664.0 |
| Second Quarter | 36.95 | 28.65 | 35.35 | 27.05 | 25,701 | 8,716.3 | 8,053.7 |
| Third Quarter | 39.60 | 34.60 | 38.00 | 33.00 | 17,249 | 9,284.6 | 8,575,8 |
| Fourth Quarter | 38.80 | 32.20 | 38.80 | 32.20 | 11,453 | 9,392.7 | 8,931.0 |
| October | 38.80 | 37.10 | 38.80 | 37.10 | 10,252 | 9,385.7 | 9,165.2 |
| November | 37.05 | 33.35 | 37.05 | 33.35 | 12,058 | 9,272.7 | 8,931.0 |
| December | 34.55 | 32.20 | 34.55 | 32.20 | 11,942 | 9,392.7 | 9,078.6 |
| 2017 | | | | | | | |
| First Quarter | 39.90 | 33.75 | 39.90 | 33.75 | 17,231 | 9,972.5 | 9,272.9 |
| January | 34.70 | 32.80 | 34.70 | 32.80 | 12,213 | 9,448.0 | 9,272.9 |
| February | 38.85 | 36.55 | 38.85 | 36.55 | 20,684 | 9,799.8 | 9,429.0 |
| March | 39.90 | 37.45 | 39.90 | 37.45 | 16,692 | 9,972.5 | 9,272.9 |
| Second Quarter | | | | | | | |
| April (through April 14, 2017) | 39.30 | 37.85 | 39.30 | 37.85 | 12,056 | 9,949.5 | 9,732.9 |

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

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.

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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 March 31, 2017, a total of 108,090,943 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 April 13, 2017 was US$6.25 per ADS.

| | Closing Price per ADS | | Adjusted Closing Price per ADS[(1)] | | Average Daily Trading Volume (in thousands of ADSs) | New York Stock Exchange Index | |
|---|---|---|---|---|---|---|---|
| | High | Low | High | Low | | High | Low |
| | US$ | US$ | US$ | US$ | | | |
| 2012 | 5.27 | 3.54 | 4.10 | 2.82 | 1,065 | 8,516.4 | 7,285.5 |
| 2013 | 5.35 | 3.91 | 4.65 | 3.11 | 746 | 10,400.3 | 8,604.4 |
| 2014 | 6.87 | 4.45 | 5.97 | 3.87 | 752 | 11,104.7 | 9,741.6 |
| 2015 | 7.89 | 4.69 | 7.11 | 4.50 | 1,405 | 11,239.7 | 9,601.4 |
| First Quarter | 7.89 | 5.96 | 7.11 | 5.37 | 1,485 | 11,122.1 | 10,514.6 |
| Second Quarter | 7.51 | 6.39 | 6.77 | 5.76 | 1,412 | 11,239.7 | 10,790.3 |
| Third Quarter | 6.67 | 4.69 | 6.01 | 4.50 | 1,700 | 11,024.9 | 9,601.4 |
| Fourth Quarter | 6.12 | 5.18 | 5.87 | 4.97 | 1,028 | 10,609.9 | 9,821.0 |
| 2016 | 6.21 | 4.41 | 6.14 | 4.23 | 916 | 11,237.2 | 9,029.9 |
| First Quarter | 5.87 | 4.95 | 5.63 | 4.75 | 1,015 | 10,237.0 | 9,029.9 |
| Second Quarter | 5.78 | 4.41 | 5.55 | 4.23 | 1,439 | 10,641.2 | 9,973.5 |
| Third Quarter | 6.21 | 5.35 | 6.14 | 5.13 | 633 | 10,892.2 | 10,409.5 |
| Fourth Quarter | 6.12 | 4.92 | 6.12 | 4.92 | 576 | 11,237.2 | 10,289.3 |
| October | 6.12 | 5.80 | 6.12 | 5.80 | 542 | 10,690.8 | 10,476.6 |
| November | 5.83 | 5.12 | 5.83 | 5.12 | 503 | 10,878.1 | 10,289.3 |
| December | 5.43 | 4.92 | 5.43 | 4.92 | 683 | 11,237.2 | 10,829.0 |
| 2017 | | | | | | | |
| First Quarter | 6.62 | 5.09 | 6.62 | 5.09 | 1,176 | 11,661.2 | 11,148.9 |
| January | 5.80 | 5.09 | 5.80 | 5.09 | 656 | 11,339.1 | 11,148.9 |
| February | 6.19 | 5.78 | 6.19 | 5.78 | 1,359 | 11,578.3 | 11,207.2 |
| March | 6.62 | 6.09 | 6.62 | 6.09 | 1,477 | 11,661.2 | 11,414.3 |
| Second Quarter | | | | | | | |
| April (through April 13, 2017) | 6.54 | 6.25 | 6.54 | 6.25 | 1,601 | 11,473.6 | 11,324.5 |

(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.

SELLING SHAREHOLDERS

Not applicable.

DILUTION

Not applicable.

EXPENSES OF THE ISSUE

Not applicable.

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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, 8,273,546,046 of which were outstanding as of March 31, 2017. 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.

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 March 31, 2017, we had granted 480,075,500 options pursuant to employee stock option plans established on November 22, 2007, 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.

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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$0.09 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.”

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 March 31, 2017. 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.

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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.

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;

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- 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.

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.

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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.

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.

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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:

- 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.

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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").

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 if 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.

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Subject to approval at the extraordinary general shareholders' meeting of ASE shareholders, ASE Holding will issue 3,961,811,298 ASE Holding common shares (based on the number of issued shares of ASE on September 30, 2016) in connection with the Share Exchange.

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.

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.

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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.

Apart from trade-related or service-related foreign exchange transactions, ROC companies and individual residents of the ROC reaching the age of 20 years old may, without foreign exchange approval, remit foreign currency of up to US$50 million (or its equivalent) and US$5 million (or its equivalent) to and from the ROC, respectively, in each calendar year. The above limits apply to remittances involving either a conversion of NT dollars into a foreign

currency or a conversion of foreign currency into NT dollars. In addition, a requirement is also imposed on all enterprises to register medium- and long-term foreign debt with the Central Bank of the Republic of China (Taiwan).

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

## 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.

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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, currently at the rate of 20% (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). A 10% undistributed earnings tax is imposed on a ROC company for its after-tax earnings generated after January 1, 1998 which are not distributed in the following year. The undistributed earnings tax so paid will further reduce the retained earnings available for future distribution. When we declare a dividend out of those retained earnings, an amount in respect of the undistributed earnings tax, up to a maximum amount of 5% of the dividend to be distributed, will be credited against the withholding tax imposed on the non-ROC holders.

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.

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. On April 11, 2017, the amendment to reduce the tax rate for day trading of shares to 0.15% for one year was passed and will come into force after said amendment is promulgated by the President of ROC.

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 rate of 10%. Under the ROC Estate and Gift Tax Act, common shares issued by ROC companies are deemed located in the ROC without regard to the location of the owner. It is unclear whether a holder of ADSs will be considered to own common shares for this purpose.

Tax Treaty

At present, the ROC has income tax treaties with Indonesia, Singapore, New Zealand, Australia, the United Kingdom, South Africa, Gambia, 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.

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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.

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 our voting 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.

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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.

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 depositary (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.

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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.

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 2016 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.

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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.

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 32 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 the interest rate risk on 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 had the maturity schedule in February 2015 but was early 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, 2016.

| | Expected Maturity Date | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2017 | 2018 | 2019 | 2020 | 2021 | Thereafter | Total | Fair Value |
| | (in millions, except percentages) | | | | | | | |
| Short-term borrowings: | | | | | | | | |
| Variable rate (US$) | 134.7 | - | - | - | - | - | 134.7 | 134.7 |
| Average interest rate | 1.86 % | - | - | - | - | - | 1.86 % | |
| Fixed rate (US$) | 195.7 | - | - | - | - | - | 195.7 | 195.7 |
| Average interest rate | 1.38 % | - | - | - | - | - | 1.38 % | |
| Variable rate (RMB) | 2,115.0 | - | - | - | - | - | 2,115.0 | 2,115.0 |
| Average interest rate | 5.32 % | - | - | - | - | - | 5.32 % | |
| Fixed rate (RMB) | 84.7 | - | - | - | - | - | 84.7 | 84.7 |
| Average interest rate | 3.69 % | - | - | - | - | - | 3.69 % | |
| Fixed rate (EUR) | 2.2 | - | - | - | - | - | 2.2 | 2.2 |
| Average interest rate | 0.70 % | - | - | - | - | - | 0.70 % | |
| Long-term borrowings: | | | | | | | | |
| Variable rate (NT$) | 1,222.2 | 26,611.1 | 6,403.3 | - | - | - | 34,236.6 | 34,236.6 |
| Average interest rate | 0.93 % | 1.23 % | 1.70 % | - | - | - | 1.30 % | |
| Fixed rate (NT$) | - | 1,500.0 | - | - | 7,000.0 | 2,000.0 | 10,500.0 | 10,500.0 |
| Average interest rate | - | 1.20 % | - | - | 1.30 % | 1.50 % | 1.32 % | |
| Variable rate (US$) | 163.0 | 240.0 | - | - | - | - | 403.0 | 403.0 |
| Average interest rate | 3.28 % | 3.27 % | - | - | - | - | 3.28 % | |
| Fixed rate (US$) | 302.4 | 0.1 | - | - | - | - | 302.5 | 302.5 |
| Average interest rate | 2.14 % | 5.71 % | - | - | - | - | 2.14 % | |
| Variable rate (RMB) | 19.1 | 76.2 | 162.0 | 171.5 | 171.5 | 344.0 | 944.3 | 944.3 |
| Average interest rate | 5.86 % | 6.12 % | 6.31 % | 6.55 % | 6.79 % | 7.00 % | 6.67 % | |
| Fixed rate (RMB) | 0.0 | - | - | - | - | - | 0.0 | 0.0 |
| Average interest rate | 2.29 % | - | - | - | - | - | 2.29 % | |

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***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 32 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$1,222.0 million and NT$713.2 million in 2014 and 2015, respectively, and net foreign exchange gains of NT$1,928.4 million (US$59.5 million) in 2016. 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.

The table below sets forth our outstanding forward exchange contracts and swap contracts, for which the expected maturity dates are in 2017, in aggregate terms by type of contract as of December 31, 2016.

Forward Exchange Contracts and Swap Contracts

| | Forward Exchange Contracts | Swap Contracts |
|---|---|---|
| Buy US$ against NT$ | | |
| Notional Amount | US$90 million | US$1,871.0 million |
| Weighted Average Strike Price | US$/NT$ 31.581 | US$/NT$ 31.960 |
| Fair Value | US$1.816 million | US$4.956 million |
| Sell US$ against NT$ | | |
| Notional Amount | US$190.0 million | US$61.0 million |
| Weighted Average Strike Price | US$/NT$ 32.102 | US$/NT$ 32.113 |
| Fair Value | Negative US$0.700 million | Negative US$0.245 million |
| Sell US$ against RMB | | |
| Notional Amount | US$70 million | US$49.9 million |
| Weighted Average Strike Price | US$/RMB 6.926 | US$/RMB 7.009 |

| | | |
|---|---|---|
| Fair Value | Negative US$0.241 million | Negative US$0.023 million |
| | | |
| Sell US$ against JP¥ | | |
| Notional Amount | US$43.9 million | US$77.2 million |
| Weighted Average Strike Price | US$/JP¥ 115.410 | US$/JP¥ 111.467 |
| Fair Value | Negative US$0.542 million | Negative US$3.472 million |
| | | |
| Sell US$ against MYR | | |
| Notional Amount | US$19.0 million | - |
| Weighted Average Strike Price | US$/MYR 4.450 | - |
| Fair Value | Negative US$0.174 million | - |
| | | |
| Sell US$ against SGD | | |
| Notional Amount | US$12.9 million | - |
| Weighted Average Strike Price | US$/SGD 1.402 | - |
| Fair Value | Negative US$0.402 million | - |
| | | |
| Sell US$ against KRW | | |
| Notional Amount | US$35 million | - |
| Weighted Average Strike Price | US$/KRW 1,171.791 | - |
| Fair Value | Negative US$1.054 million | - |
| | | |
| Sell US$ against EUR | | |
| Notional Amount | US$0.3 million | - |
| Weighted Average Strike Price | US$/EUR 0.960 | - |
| Fair Value | US$0.000million | - |

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***Other Market Risk.*** Our exposure to other market risk relates primarily to our investments in publicly-traded stock, 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, 2016, 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$2,540.6 million (US$78.4 million). As of December 31, 2016, our investments classified as available-for-sale financial assets were NT$1,295.0 million (US$40.0 million), primarily consisting of publicly-traded stock, 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$26.0 million (US$0.8 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. In addition, we are also exposed to our share price risk through conversion option, redemption option and put option of convertible bonds recognized as financial liabilities held for trading. If our share price increases or decreases by 7.0%, our profit before income tax for the year ended December 31, 2016 will decrease by NT$510.0 million (US$15.7 million) or increase by NT$445.0 million (US$13.7 million), respectively. 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.