TOWER SEMICONDUCTOR LTD
Form 20-F
April 10, 2017

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 20-F

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

For the fiscal year ended December 31, 2016 Commission File number: 0-24790

TOWER SEMICONDUCTOR LTD.
(Exact name of registrant as specified in its charter and translation of registrant's name into English)

Israel
(Jurisdiction of incorporation or organization)
Ramat Gavriel Industrial Park
P.O. Box 619, Migdal Haemek 23105, Israel

(Address of principal executive offices)

Nati Somekh, +972-4-6506109, natiso@towersemi.com;
Ramat Gavriel Industrial Park P.O. Box 619, Migdal Haemek 2310502, Israel

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

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

Title of Each Class	Name of Each Exchange on Which Registered
Ordinary Shares, par value New Israeli Shekels 15.00 per share	NASDAQ Global Select Market

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: 92,984,626 Ordinary Shares.

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 website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (section 229.405 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.

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:

US 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

FORWARD LOOKING STATEMENTS

This annual report on Form 20-F includes certain “forward-looking” statements within the meaning of Section 21E of the Securities Exchange Act of 1934. The use of the words “projects,” “expects,” “may,” “plans” or “intends,” or words of similar import, identifies a statement as “forward-looking”. There can be no assurance, however, that actual results will not differ materially from our expectations or projections. Factors that could cause actual results to differ from our expectations or projections include the risks and uncertainties relating to our business described in this annual report in “Item 3. Key Information-Risk Factors”.

EXPLANATORY INFORMATION

All references herein to “dollars”, "US dollars", “USD” or “$” are to United States dollars, all references to “JPY” is to the Japanese Yen and all references to “Shekels” or “NIS” are to New Israeli Shekels.

In 2008, we completed a merger with Jazz Technologies, Inc. (“Jazz Technologies”) and its wholly-owned subsidiary Jazz Semiconductor, Inc. (“Jazz Semiconductor”), an independent semiconductor foundry focused on specialty process technologies for the manufacture of analog intensive mixed-signal semiconductor devices. As a result of this transaction, Jazz Technologies became a wholly-owned subsidiary of Tower Semiconductor Ltd. (“Tower”). In November 2015, Jazz Technologies (i) was re-named to become Tower US Holdings Inc. (“Tower US Holdings”) and (ii) transferred all of its liabilities and all of its assets, including its ownership of all of the shares of Jazz

Semiconductor to Jazz US Holdings Inc. (“Jazz US Holdings”), a company registered under the laws of Delaware and fully owned by Tower US Holdings (the “November 2015 Jazz Restructure”). The November 2015 Jazz Restructure established Jazz US Holdings as an intermediate holding company, holding all of the shares of Jazz Semiconductor. Tower US Holdings remains 100% owned by Tower. As used in this report, “Jazz” refers to Jazz Technologies, including its subsidiaries, for the period preceding November 23, 2015, and to Jazz US Holdings, including its subsidiaries, following such date.

In 2011, we acquired a fabrication facility in Nishiwaki City, Hyogo, Japan from Micron Technology, Inc. ("Micron") which we held through a wholly-owned Japanese subsidiary, TowerJazz Japan, Ltd. (“TJP”). In July 2014, the operations of the facility in Nishiwaki ceased in the course of a restructuring of our activities and business in Japan and it completed its dissolution during the second half of 2016.

In March 2014, we acquired a 51% equity stake in TowerJazz Panasonic Semiconductor Co., Ltd., (“TPSCo”), a company formed by Panasonic Corporation (“Panasonic” or “Panasonic Corporation” or “PSCS”), holding three manufacturing facilities in Japan.

In February 2016, we acquired a fabrication facility in San Antonio, Texas, from Maxim Integrated Products Inc. (“Maxim”). The assets and related business that we acquired from Maxim are held and conducted through an indirect wholly owned US subsidiary, TowerJazz Texas Inc. ("TJT"). TJT is fully owned by Tower US Holdings.

The consolidated financial statements included in this annual report include the results and balances of Tower and the following companies from the applicable merger and acquisition dates: (i) Tower’s wholly-owned subsidiary Jazz, (ii) since March 31, 2014, its majority-owned subsidiary, TPSCo and (iii) since February 1, 2016 its indirect wholly-owned subsidiary, TJT.

As used in this annual report, “Fab 1” means the semiconductor fabrication facility located in Migdal Haemek, Israel that Tower acquired from National Semiconductor Inc. (“National Semiconductor”) in 1993. “Fab 2” means the semiconductor fabrication facility located in Migdal Haemek, Israel that Tower established in 2003. “Fab 3” means the semiconductor fabrication facility Jazz operates in Newport Beach, California. “Fab 4” means the semiconductor fabrication facility TJP operated in Nishiwaki City, Hyogo, Japan until July 2014. “Arai E” means the semiconductor fabrication facility TPSCo operates in Kurihara 4-5-1, Myoko-shi, Niigata, Japan. “Uozu E” means the semiconductor fabrication facility TPSCo operates in Higashiyama 800, Uozu-shi, Toyama, Japan. “Tonami CD” means the semiconductor fabrication facilities TPSCo operates in Higashi-Kaihotsu 271, Tonami-shi, Toyama, Japan. “Fab 9” means the semiconductor fabrication facility in San Antonio, Texas that we acquired from Maxim.

As used in this annual report, as of any particular date, “we,” “us,” “our,” and “the Company” and words of similar import, refer collectively to Tower and its then owned and/or consolidated subsidiaries.

Manufacturing or production capacity refers to installed equipment capacity in our facilities and is a function of the process technology and product mix being manufactured because certain processes require more processing steps than others. All information herein with respect to the wafer capacity of our manufacturing facilities is based upon our estimate of the effectiveness of the manufacturing equipment and processes in use or expected to be in use during a period and the estimated or expected process technology and product mix for such period. Unless otherwise specifically stated, all references herein to “wafers” with respect to Fab 1 capacity are to 150-mm wafers, with respect to Fab 2, Fab 3, Fab 4, Arai E, Tonami CD and Fab 9 capacity are to 200-mm wafers, and with respect to Uozu E are to 300-mm wafers, ranging from 0.18 micron to 0.8 micron for the manufacture of products using CMOS and analog based technologies.

TABLE OF CONTENTS

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISORS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

Selected Consolidated Financial Data

Our historical consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States ("US GAAP") and are presented in U.S. dollars ("USD"). The selected historical audited consolidated financial information as of December 31, 2016 and 2015 and for each of the three years ended December 31, 2016, 2015 and 2014 has been derived from, and should be read in conjunction with, our audited consolidated financial statements, and notes thereto appearing elsewhere in this annual report. The selected financial data as of December 31, 2014, 2013 and 2012 and for each of the years ended December 31, 2013 and 2012 has been derived from our audited consolidated financial statements for those years not included in this annual report.

Our audited consolidated financial statements include TJP's results commencing June 3, 2011, TPSCo's results commencing April 1, 2014, and TJT's results commencing February 1, 2016. Our audited consolidated balance sheets include TJP's balances since December 31, 2011, TPSCo's balances since December 31, 2014, and TJT's balances since December 31, 2016. As mentioned above, in July 2014, the operations of TJP in the Nishiwaki facility ceased in the course of a restructuring of our activities and business in Japan and it completed its dissolution during 2016.

Due to the acquisition of TPSCo and TJT and the cessation of operations of TJP, it may be difficult to compare the results of operations for the period subsequent to these transactions with prior periods. The selected historical consolidated financial data set forth below should be read in conjunction with our consolidated financial statements and related notes appearing in this annual report and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere in this report. Our historical financial information may not be indicative of future performance.

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(Dollars in thousands, except per share data)				
Statement of Operations Data:					
Revenues	$1,249,634	$960,561	$828,008	$505,009	$638,831
Cost of revenues	946,534	755,196	764,220	476,900	560,046
Gross profit	303,100	205,365	63,788	28,109	78,785
Research and development	63,134	61,669	51,841	33,064	31,093
Marketing, general and administrative	65,439	62,793	58,783	42,916	44,413
Nishiwaki Fab restructuring and impairment cost (income), net	(627)	(991)	55,500	--	--
Acquisition related costs	--	--	1,229	--	5,789
Amortization related to a lease agreement early termination	--	--	--	7,464	--
Operating profit (loss)	175,154	81,894	(103,565)	(55,335)	(2,510)
Interest expense, net	(11,857)	(13,179)	(33,409)	(32,971)	(31,808)
Other non-cash financing expense, net	(12,492)	(109,930)	(55,404)	(27,838)	(27,583)
Gain from acquisition, net	50,471	-	166,404	--	--
Other income (expense), net	9,322	(190)	(140)	(904)	(1,042)
Income (loss) before income tax	210,598	(41,405)	(26,114)	(117,048)	(62,943)
Income tax benefit (expense)	(1,432)	12,278	24,742	9,388	(7,326)
Net Profit (loss)	209,166	(29,127)	(1,372)	(107,660)	(70,269)
Net loss (income) attributable to non controlling interest	(5,242)	(520)	5,635	--	--
Net Profit (loss) attributable to the Company	$203,924	$(29,647)	$4,263	$(107,660)	$(70,269)
Basic earnings (loss) per ordinary share	$2.33	$(0.40)	$0.08	$(2.72)	$(3.17)
Diluted earnings per ordinary share	$2.09		$0.07		
Other Financial Data:					
Depreciation and amortization, including amortization of financing expenses and accretion	$197,756	$256,005	$243,362	$164,824	$173,585

	As of December 31,				
	2016	2015	2014	2013	2012
	(Dollars and share data in thousands)				
Selected Balance Sheet Data:					
Cash and cash equivalents, short-term interest-bearing deposits and designated deposits	$389,377	$205,575	$187,167	$122,871	$133,398
Working capital	450,883	235,608	93,759	150,498	128,787
Total assets	1,379,884	965,368	884,146	705,887	814,241
Short-term bank debt and current maturities of loans and debentures	48,084	33,259	119,999	36,441	49,923
Loan from banks, net of current maturities	133,163	210,538	159,776	108,739	94,922
Debentures, net of current maturities	162,981	45,481	107,311	208,146	193,962
Shareholders' equity	682,614	385,586	195,561	141,248	220,025
Number of shares outstanding as of December 31 of any year	92,985	82,058	58,034	47,870	22,312

Risk Factors

Our business faces many risks. Any of the risks discussed below may have an adverse impact on our business, financial condition and operating results.

Risks Affecting Our Business

Demand for our foundry services is dependent on the demand in our customers' end markets. A material decrease in demand for products that contain semiconductors may decrease the demand for our services and products and a decrease in the selling prices of our customers' products may reduce our profitability and business.

Our customers generally use the semiconductors produced in our fabs in a wide variety of applications. We derive a significant percentage of our operating revenues from customers who use our manufacturing services to make semiconductors for communication devices, consumer electronics, PCs and other electronic devices. Any significant decrease in the demand for these electronic devices or products may decrease the demand for our services and products. In addition, if the average selling prices of communication devices, consumer electronics, PCs or other electronic devices decline significantly, we may be pressured to reduce our selling prices, which may reduce our revenues and margins significantly. As demonstrated by downturns in demand for high technology products in the past, market conditions can change rapidly, without apparent warning or advance notice. In such instances, our customers may experience inventory buildup and/or difficulties in selling their products and, in turn, may reduce or cancel orders for wafers from us, which may harm our business and profitability. The timing, severity and recovery of these downturns cannot be predicted.

In order for demand for our wafer fabrication services to increase, the markets for the end products utilizing the integrated circuits that we manufacture must develop and expand. For example, the success of our imaging process technologies will depend, in part, on the growth of markets for certain image sensor product applications. Because our services may be used in many new applications, it is difficult to forecast demand. If demand is lower than expected, we may have excess capacity and our revenue may not be sufficient to cover all our costs and serve all our debt, which may adversely affect our financial results and financial position.

Over-demand for our foundry services and/or products may result in a loss of customers and revenues, which may adversely affect our profitability and business.

In periods during which demand for our foundry services exceeds our capacity and manufacturing capabilities, we may be (i) unable to fulfill customer demand in whole or in part, in a timely manner or at all; (ii) incapable to assure production of customers' next generation of products; and/or (iii) unable to provide additional capacity from any of our geographic facilities through transfer of process technologies, successful implementation and timely qualification. As a result, we could lose one or more of our current and/or potential customers, which may adversely affect our revenues, profitability and business.

If we do not maintain our current customers and attract additional customers, our business and profitability may be adversely affected.

Loss or cancellation of business from, or decreases in the sales volume or sales prices to, our significant customers, or our failure to replace lost business with new customers, may seriously harm our financial results, revenues and business.

We have relationships with several customers that represent a material portion of our revenues. During the year ended December 31, 2016, we had four customers that contributed between 5% to 35% of our revenues. During the year ended December 31, 2015, we had three customers that each contributed between 6% to 40% of our revenues. During the year ended December 31, 2014, we had four customers that each contributed between 7% to 38% of our revenues. The loss or reduction in volume of any one of these customers, whether due to their insolvency or their unwillingness or inability to perform their obligations under their respective relationships with us, or if we are unable to renew our engagements with them on commercially reasonable terms, or attract additional customers to replace such lost business, may materially negatively impact our overall business and our consolidated financial position.

Panasonic Semiconductor Solutions Co., Ltd. ("PSCS"), a wholly-owned subsidiary of Panasonic Corporation, , is a significant customer of TPSCo and Tower on a consolidated basis and is expected to continue to comprise a major portion of TPSCo's and Tower's revenues under the five year volume manufacturing agreement with us from March 2014. We have commenced discussions with PSCS in regard to the terms of renewing the agreement beyond March 2019. 35% and 40% of our consolidated revenues for the years ended December 31, 2016 and 2015, respectively, were from PSCS under said agreement. Failure to maintain current or similar selling prices per wafer from PSCS when renewing the agreement as described above, may adversely affect our revenue and profitability and may have an adverse effect on the operations of one or more of TPSCo's manufacturing facilities if its/their revenue will not cover in full its/their operating and other costs.

The production lines of our manufacturing fabrications may stop for short or long periods of time due to high utilization in certain areas, bottlenecks, power outages, water leaks, chemical leaks or other issues, which may adversely affect our cycle time, yield, and on schedule delivery. In addition, affected customers may elect to transfer their product orders to other fabs, thereby potentially causing an immediate loss of a potentially material amount of revenues for the applicable period, which would adversely affect our revenue, profitability and financial position.

There are many events that may occur which may adversely affect the manufacturing process running in a facility. From time to time, we experience high utilization rates in certain of our manufacturing lines and/or areas, which cause bottlenecks in the lines and/or specific areas and/or specific machines, power outages, water leaks, chemical leaks or other issues that may adversely affect our cycle time, yield and on schedule delivery. We try to mitigate any potential damage caused by such events and have insurance coverage, which we believe to be sufficient. However, we cannot ensure that such events will not have a negative effect on the Company, such as late deliveries, which may cause customers to elect to transfer their product orders to other fabs, thereby potentially causing an immediate material loss of revenues for the applicable period, which may adversely affect our revenue, profitability and financial position.

Our operating results may fluctuate from quarter to quarter which makes it difficult to predict our future performance and such fluctuations may ultimately negatively affect our financial position.

Our revenues, expenses and operating results have varied significantly in the past and may fluctuate significantly from quarter to quarter in the future due to a number of factors, a portion of which are beyond our control. These factors include, among others:

- The cyclical nature of the semiconductor industry and the volatility of the markets served by our customers;
- Changes in the economic conditions of geographical regions where our customers and their markets are located;
- Inventory and supply chain management of our customers;
- The loss of a key customer, postponement of an order from a key customer or the rescheduling or cancellation of large orders;
- The occurrence of accounts receivable write-offs, failure of a key customer to pay accounts receivable in a timely manner or the financial condition of our customers;
- The occurrence of an unexpected event, such as environmental events or industrial accidents such as fire or explosions, electricity outage or misprocess, affecting the manufacturing process and our ability to recover the lost or damaged products and provide quality and timely production to our customers without charging them significant additional costs;
- Completing capacity expansions and recruitment of personnel in a timely manner to address product demands by our customers;
- Mergers and acquisitions in the semiconductor industry and their effect on our market share;
- Our ability to satisfy our customers' demand for quality and timely production;
- The timing and volume of orders relative to our available production capacity;
- Our ability to obtain raw materials and equipment on a timely and cost-effective basis;

·Price erosion in the industry and our ability to negotiate prices with our current customers and new customers;

- Our susceptibility to intellectual property rights' disputes;

- Our dependency on export licenses and other permits required for our operations and the sale of our products;

- Our ability to maintain existing partners and to enter into new partnerships and technology and supply alliances on mutually beneficial terms;

- Interest, price index and currency rate fluctuations that were not hedged;

- Technological changes and short product life cycles;

- Timing for the design and qualification of new products;

- The possibility that integrated device manufacturers continue to design and manufacture integrated circuits in their own fabrication facilities or that in certain periods or under certain circumstances such as low demand, they will choose to manufacture their products in their facilities instead of manufacturing products at external foundries; and

- Changes in accounting rules affecting our results.

Due to the factors noted above and other risks discussed in this section, a portion of which are beyond our control, it may be difficult to predict our future performance and any such fluctuations may ultimately negatively affect our operating results and our financial position.

Our financial position and operations may be affected as a result of our long term debt.

As of December 31, 2016, we had approximately $346 million of consolidated long term debt outstanding, comprised as follows: (1) Tower had approximately $122 million outstanding debentures Series G, payable in seven semi-annual consecutive equal installments from March 2020 to March 2023; (2) Jazz had approximately $58 million of outstanding debentures, convertible into our ordinary shares, payable in December 2018, unless converted earlier; (3) TPSCo had loans amounting to approximately $126 million comprised of (i) approximately $53 million provided by JA Mitsui Leasing, Ltd. and Bank of Tokyo Lease Co., Ltd. (BOT), to be repaid in seven semi-annual equal installments payable between 2016 and June 2019; and (ii) approximately $73 million provided by JA Mitsui Leasing, Ltd. Sumitomo Mitsui Trust Bank Limited and Showa Leasing Co., Ltd., to be repaid in seven semi-annual equal installments between2017 and 2020; and (4) TJT had a loan amounting to $40 million from JA Mitsui Leasing, repayable in seven semi-annual installments between 2019 and 2022. Carrying such amount of long term debt may have significant negative consequences on our business, including:

- limiting our ability to fulfill our debt obligations and other liabilities;

- requiring the use of a substantial portion of our cash to service our indebtedness rather than investing our cash to fund our strategic growth opportunities and plans, working capital and capital expenditures;

- increasing our vulnerability to adverse economic and industry conditions;

- limiting our ability to obtain additional financing;

- limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we compete;

- placing us at a competitive disadvantage with respect to less leveraged competitors and competitors that have better access to capital resources;

- volatility in our non-cash financing expenses due to increases in the fair value of our debt obligations;

- fluctuations of the payable amounts in USD of TPSCo loans or other expenses which are denominated in JPY;

- enforcement by the lenders of their liens against our respective assets, as applicable, at the occurrence of an event of default.

In order to service our debt and other liabilities and obligations and/or improve its terms and conditions and/or to invest in strategic opportunities for growth and/or business development activities, in addition to our cash on hand and expected cash flow generation from operating activities, we may decide to obtain funds from additional sources including debt vehicles and/or re-financing, sale of new securities, sale of intellectual property and/or intellectual property licensing, as well as additional financing alternatives. However, there is no assurance that we will be able to obtain sufficient funding, if at all, from the financing sources detailed above or other sources in a timely manner (or on commercially reasonable terms) in order to allow us to fund our growth plans and/or cover, in a timely manner, all our costs, capital expenditure investments and all of our scheduled debt detailed above, liabilities and obligations, which may adversely affect our financial position and operations.

Our success as a leading specialty foundry depends on our ability to continue to expand our business, customer base and market presence, including through acquisitions, such as in 2014 (three Japanese fabs) and 2016 (San Antonio fab), which involve various risks. There is no assurance that we will be successful in executing our acquisitions, utilizing the acquired facilities at least in an amount that may cover their costs, integrating them into our business and finding new customers and business in order to operate such acquired facilities profitably.

Our Company’s growth as a leading specialty foundry depends, to a significant degree, upon our ability to increase our presence in the specialty foundry field and gain more market share across the various specialty segments. In order to do so and thereby improve our financial position and operations, we need to expand our business, including through acquisitions, as we have done in 2014 by acquiring the three Japanese fabs from Panasonic and in 2016 by acquiring the San Antonio fab from Maxim, and attract new customers that will utilize our expanded capacity.

Our success at such expansion is dependent, in part, on finding suitable targets for acquisitions, successfully financing and consummating such acquisitions, integrating the acquired facilities into our business and loading them at least in an amount that may cover their operating and other costs.

Our reliance on acquisitions as a means of growth involves risks that may adversely affect our future revenues and operating results. For example:

- We may fail to identify acquisitions that would enable us to execute our business strategy.

- Other foundries may bid against us to acquire potential targets. This competition may result in decreased availability of, or increased prices for, suitable acquisition candidates.

- We may not be able to obtain the necessary regulatory approvals, or we may not be able to obtain the necessary approvals from our lenders, and as a result, or for other reasons, we may fail to consummate certain acquisitions.

- Potential acquisitions and integration require the dedication of substantial management effort, time and resources which may divert management's attention, focus and resources from our existing business operations or other strategic opportunities, which may have a negative adverse effect on our business.

- We may fail to integrate acquisitions successfully in accordance with our business strategy, achieve anticipated benefits depending in part on successfully consolidating functions and integrating operations, procedures and personnel in a timely and efficient manner, expected synergies, attract sufficient business to newly acquired facilities in a timely manner or realize the anticipated growth opportunities from integrating an acquired business into our existing business.

- We may not be able to retain experienced management and skilled employees from the businesses we acquire and, if we cannot retain such personnel, we may not be able to attract new skilled employees and experienced management to replace them.

- We may purchase a company with excessive unknown contingent liabilities, including, among others, patent infringement or product liability.

- We may not be able to obtain sufficient financing which could limit our ability to engage in certain acquisitions.

- The amount or terms of financing actually required before and after acquisition may vary from our expectations.

We cannot assure you that we will be successful in expanding our business, finding and successfully execute such acquisitions or that they will achieve the expected synergies. Further, we cannot assure you that we will increase our market presence and attract new customers and business in order to operate such acquired facilities profitably. With respect to TPSCo's three Japanese fabs, its ability to successfully operate and fund its operating and business is dependent primarily on the following: (i) continuation by PSCS to order a sufficient number of wafers and manufacturing services from TPSCo; (ii) maintaining current or similar selling prices per wafer beyond the current agreement term (March 2019); and (iii) attracting new customers and successfully ramping to production existing and new customers' products. We already commenced discussions with PSCS in regard to the terms of renewing said manufacturing agreement. Failure to significantly utilize TPSCo's manufacturing capacity and generate sufficient revenues from PSCS and/or new customers in an amount which will cover TPSCo's costs, as well as failure to maintain current or similar selling prices per wafer from PSCS when renewing said agreement, may adversely affect TPSCo's and Tower's revenue and profitability and may have an adverse effect on the operations of one or more of TPSCo's manufacturing facilities if its revenue will not cover its full operating and other costs.

With regards to TJT's fab, Maxim is expected to be a significant customer of TJT, based on a long term 15 year volume manufacturing agreement, at least during the initial five year period. While we have commenced to engage and develop business with third party foundry customers to initiate manufacturing at TJT, and have begun certain process technology transfers to enable ramp of customer products which currently require additional demand which cannot be fulfilled in our other facilities, implementation of new customer processes may take between one to three years to reach mass volume production, as customary in our industry. Failure to generate sufficient revenues from Maxim and/or new customers in an amount which will cover TJT's costs may adversely affect TJT's and Tower's revenue and profitability and may have an adverse effect on the operations of this facility if its revenue will not cover its full operating and other costs.

If we are unable to manage fluctuations in cash flow, our business and financial position may be adversely affected.

Our working capital requirements and cash flows are subject to quarterly and yearly fluctuations, depending on a number of factors. If we are unable to manage fluctuations in cash flow, our business, operating results and financial condition may be materially adversely affected. Factors which may lead us to suffer cash flow fluctuations include:

·fluctuations in the level of revenues from our operating activities;

·fluctuations in the collection of receivables;

·iming and size of payables;

·the timing and size of capital expenditures;

·the net impact of JPY/ USD fluctuations on our JPY income and JPY expenses;

·the repayment schedules of our debt service obligations;

·our ability to fulfill our obligations and meet performance milestones under our agreements;

·fluctuations in the LIBOR or TIBOR (Tokyo Interbank Offered Rate) rates which apply to our banks' loans; and

·fluctuations in the USD to NIS exchange rate.

We are required to comply with the terms of the Israeli Investment Center approved plan and regulations.

In 2011, we received an official approval certificate ("ktav ishur") from the Israeli investment center ("Investment Center"), a governmental agency, for our expansion program pursuant to which we have received approximately $36 million to date for investments made commencing 2006 and through 2012. The final investments report detailing all investments made in accordance with the approval has been filed with the Investment Center. Under our previous program approved in December 2000, we received $165 million of grants for capital expenditure investments made during the years 2001 through 2005. This plan was completed and approved by the Investment Center.

Eligibility for the above grants is subject to various conditions stipulated by the Israeli Law for the Encouragement of Capital Investments - 1959 ("Investments Law") and the regulations promulgated thereunder, as well as the criteria set forth in the certificates of approval. In the event we breach the various conditions and terms related thereto, we may be exposed to significant penalties by the Investment Center. In order to secure fulfillment of the conditions related to the receipt of investment grants, floating liens were registered in favor of the State of Israel on substantially all of Tower's assets. These liens secure the Investment Center against a breach by us of the terms of the investments grant program.

If we do not receive orders from our customers with whom we have signed long-term contracts, we may have excess capacity. Failure to receive purchase orders currently expected may adversely affect our financial results, business and financial position.

We have committed a portion of our capacity for future orders from certain customers with whom we have signed long-term contracts. If these customers do not place orders with us in accordance with their contractual loading and purchase commitments, and if we are unable to fill such unutilized capacity in a timely manner, our financial results may be adversely affected.

When our forecast with respect to customer demand is high, we may purchase machinery in order to install additional capacity and provide for expanded production. In the event that purchase orders received from customers do not meet our expected loading forecast, our business and financial position may be adversely affected.

A global recession, unfavorable economic conditions and/or credit crisis may adversely affect our results and our ability to fulfill our debt obligations and other liabilities.

The effects of a downturn or a weakness in the semiconductor industry and/or in the global economy may include global decreased demand, downward price pressure, excess inventory and unutilized capacity worldwide, which may negatively impact consumer and customer demand for our products and the end products of our customers. Such a downturn or a weakness may adversely affect our customer base and/or our customers' products base by adversely affecting our ability to attract new customers and new business to our fabs. Such a downturn or weakness may also adversely affect our ability to increase the utilization rates in our manufacturing facilities and maintain them at a high level that would suffice to cover our substantial fixed costs, maintain commercial relationships with our customers, suppliers, and creditors, including our lenders, and continue our capacity growth. In addition, such a downturn or weakness may negatively impact our ability to improve our future financial results and position, including our ability to raise funds in the capital markets, fulfill our debt obligations and other liabilities, refinance our debt and other liabilities and/or pay them in a timely manner. There is no assurance that such downturn will not occur.

The lack of a significant backlog resulting from our customers not placing purchase orders far in advance makes it difficult for us to forecast our revenues in future periods.

Our customers generally do not place purchase orders far in advance, partly due to the cyclical nature of the semiconductor industry. As a result, we do not typically operate with any significant backlog. The lack of a significant backlog makes it difficult for us to forecast our revenues in future periods. Moreover, since our expense levels are based in part on our expectations of future revenues, we may be unable to adjust costs in a timely manner to compensate for revenues shortfalls. We expect that, in the future, our revenues in any quarter will continue to be substantially dependent upon purchase orders received in that quarter and in the immediately preceding quarter. We cannot assure you that any of our customers will continue to place orders with us in the future at the same levels as in prior periods.

We may manufacture wafers based on forecasted demand, rather than actual orders from customers. If our forecasted demand exceeds actual demand, we may have obsolete inventory, which may have a negative impact on our financial results.

We target manufacturing wafers in an amount matching each customer’s specific purchase order. On occasion, we may produce wafers in excess of a customer's orders based on forecasted customer demand, because we may forecast future excess demand or because of future capacity constraints. If we manufacture more wafers than are actually ordered by customers, we may be left with excess inventory that may ultimately become obsolete and must be scrapped or sold at a significant discount. Significant amounts of obsolete inventory may have a negative impact on our financial results.

Our financial results may be adversely affected if we are unable to operate our facilities at utilization rates that are high enough to reach revenue levels that would cover our costs and result in operating and net profits as currently expected.

As is common in our industry, a large portion of our total costs is comprised of fixed costs, associated mainly with our manufacturing facilities, while our variable costs are relatively small. Therefore, during periods when our facilities manufacture at high utilization rates, we are able to cover our costs. However, at times when the utilization rate is low, the reduced revenues may not cover all of the costs since a large portion of them are fixed costs which remain constant, irrespective of the fact that fewer wafers were manufactured. In addition, our depreciation costs and capital expenditure investments, as common in our industry, are high. If customer demand for our products is not sufficient to enable us to operate our facilities consistently at high utilization rates, we may not be able to fully reach revenue levels that would cover all of our costs and result in operating and net profits as currently expected.

Our sales cycles are typically long, and orders ultimately received may not meet our expectations, which may adversely affect our operating results.

Our sales cycles, which we measure from first contact with a customer to first shipment of a product ordered by the customer, vary substantially and may last as long as two years or more, particularly for new technologies. In addition, even after we make initial shipments of prototype products, it may take several more months to reach full production of the product. As a result of these long sales cycles, we may be required to invest substantial time and incur significant expenses before receiving any product order and related revenue. If orders ultimately received are significantly lower than our expectations, we will have excess capacity that we may not be able to fill within a short period of time, resulting in lower utilization of our facilities. This may adversely affect our operating results and financial condition considering that in addition to the revenues loss, we may be unable to adjust our costs in a timely manner to align with the lower revenue, since a large portion of our cost is fixed cost which remains constant irrespective of the number of wafers actually manufactured.

The cyclical nature of the semiconductor industry and any resulting periodic overcapacity may lead to erosion of sale prices, may make our business and operating results particularly vulnerable to economic downturns, and may reduce our revenues, earnings and margins.

The semiconductor industry has historically been highly cyclical and subject to significant and often rapid increases and decreases in product demand. Traditionally, companies in the semiconductor industry have expanded aggressively during periods of decreased demand in order to have the capacity needed to meet expected demand in future upturns. If actual demand does not increase or declines, or if companies in the industry expand too aggressively, the industry may experience a period in which industry-wide capacity exceeds demand. This could result in overcapacity and excess inventories, potentially leading to rapid erosion of average sales prices. The prices that we can charge our customers for our services are significantly related to the overall worldwide supply of integrated circuits and semiconductor products. The overall supply of semiconductor products is based in part on the capacity of other companies, which is outside of our control. In periods of overcapacity, despite the fact that we utilize niche technologies and manufacture specialty products, we may have to lower the prices we charge our customers for our services which may reduce our margins and weaken our financial condition and results of operations. In addition, we cannot give assurance that an increase in the demand for foundry services in the future will not lead to under-capacity, which could result in the loss of customers and materially adversely affect our revenues, earnings and margins. Analysts believe that such patterns may repeat in the future. The overcapacity, under-utilization and downward price pressure characteristic of a downturn in the semiconductor market and/or in the global economy, as experienced several times in the past, may negatively impact consumer and customer demand for our products, the end products of our customers and the financial markets, which may adversely affect our business, our ability to raise funds, restructure and/or re-finance our debt and service our debt and other liabilities.

15

If we do not maintain and develop our technology processes and services, we may lose customers and may be unable to attract new ones.

The semiconductor market is characterized by rapid change, including the following:

·rapid technological developments;

·evolving industry standards;

·changes in customer and product end user requirements;

·frequent new product introductions and enhancements; and

·short product life cycles with declining prices as products mature.

Our ability to maintain our current customer base and attract new customers is dependent in part on our ability to continuously develop and introduce to production advanced specialized manufacturing process technologies and purchase the appropriate equipment. If we are unable to successfully develop and introduce these processes to production in a timely manner or at all, or if we are unable to purchase the appropriate equipment required for such processes, we may be unable to maintain our current customer base and may be unable to attract new customers.

The semiconductor foundry business is highly competitive; our competitors may have competitive advantages over us and our financial results may be adversely affected if we do not successfully compete in the industry.

The semiconductor foundry industry is highly competitive. We compete most directly in the specialty segments with certain independent dedicated foundries. We also compete with the pure play advanced technology node driven foundry service providers as they each have some capacity for specialty process technologies, and with IDMs that allocate a portion of their manufacturing capacity to foundry operations.

As our competitors continue to expand their manufacturing capacity, there could be an increase in specialty semiconductor capacity. As specialty capacity increases, there may be more competition and pricing pressure on our services, which may result in underutilization of our capacity, decrease of our profit margins, reduced earnings or increased losses.

In addition, some semiconductor companies have advanced their CMOS designs to smaller than 22 nanometer process geometries. These smaller process geometries may provide customers with performance and integration features that may be comparable to, or exceed, features offered by our specialty process technologies. The smaller process geometries may also be more cost-effective at higher production volumes for certain applications, such as when a large amount of digital content is required in a mixed-signal semiconductor and less analog content is then required. Our specialty processes will therefore compete with these more advanced CMOS processes and some of our potential and existing customers could elect to design these advanced CMOS processes into their next generation products. We are not currently capable, and do not currently plan to become capable, of providing CMOS processes at these smaller process geometries. If our potential or existing customers choose to design their products in a manner whereby the percentage of digital content in specialty designs increases significantly and requires these advanced CMOS processes, our business may be negatively impacted.

In addition, many of our competitors may have one or more of the following competitive advantages over us:

·greater manufacturing capacity and /or availability of same;

·a more diverse and established customer base;

·greater financial, sales, marketing, distribution and other resources;

·governmental funding or support;

·a better cost structure; and/or

·better operational performance, including cycle time and yields.

If we do not compete successfully, our business and financial results may be adversely affected.

If we experience difficulty in achieving acceptable device yields, product performance and delivery times, as a result of manufacturing problems, our business may be adversely harmed.

The process technology for the manufacture of semiconductor wafers is highly complex, requires advanced and costly equipment and is constantly being modified in an effort to improve device yields, product performance and delivery times. Microscopic impurities such as dust and other contaminants, difficulties in the production process, defects in the key materials and tools used to manufacture wafers and other factors can cause wafers to be rejected or individual semiconductors on specific wafers to be non-functional. We may experience difficulty achieving acceptable device yields, product performance and product delivery times in the future as a result of manufacturing problems. Although we continuously enhance our manufacturing capabilities and efficiency, from time to time we have experienced production difficulties that have caused delivery delays and quality control problems. Manufacturing issues we may face include the following:

·difficulties in upgrading or expanding existing facilities;

·unexpected breakdowns in our manufacturing equipment and/or related facility systems;

·unexpected events, such as an electricity outage or misprocess, affecting the manufacturing process;

·difficulties in changing or upgrading our process technologies;

·raw material shortages or impurities;

·delays in delivery or shortages of spare parts; and

·difficulties in maintenance and upgrade of our equipment.

Should such problems occur to a material degree, we may suffer delays in delivery, loss of reputation and/or a loss of customers, any of which may adversely impact our business, revenues and financial condition.

If we are unable to purchase equipment and raw materials, we may not be able to manufacture our products in a timely fashion, which may result in a loss of existing and potential new customers and may have an adverse effect on our business and financial results.

To increase the production capability and maintain the quality of production in our facilities, we must procure additional equipment. In periods of high market demand, the lead times from order to delivery of manufacturing equipment could be as long as 12 to 18 months. We also procure used equipment which can take a long time to qualify into the manufacturing process, hence potentially delaying the manufacture of our products. In addition, our manufacturing processes use many raw materials, including silicon wafers, chemicals, gases and various metals, and require large amounts of fresh water and electricity. Manufacturing equipment and raw materials generally are available from several suppliers. In several instances, however, we purchase equipment and raw materials from a single source. Shortages in supplies of manufacturing equipment and raw materials could occur due to an interruption of supply or increased industry demand. Any such shortages could result in production delays that may result in a loss of existing and potential new customers which may have a material adverse effect on our business and financial results.

Our exposure to currency exchange and interest rate fluctuations may impact our costs and financial results.

We operate our fabs in three different regions: Japan, the United States and Israel. The functional currency of the entities operating the fabs in the United States and Israel is USD. The functional currency of our subsidiary in Japan is the JPY. Our expenses and costs are denominated mainly in NIS, USD, and JPY, our revenues are denominated mainly in USD and JPY and our cash from operations, investing and financing activities are denominated mainly in NIS, USD, and JPY. We are, therefore, exposed to the risk of currency exchange rate fluctuations in some of our entities.

The USD costs of our operations in Israel are influenced by changes in the USD to NIS exchange rate with respect to costs that are denominated in NIS. The fluctuation of USD against the NIS can affect our results of operations. Appreciation of the NIS has the effect of increasing the cost of some of our Israeli purchases and labor NIS denominated costs in USD terms, which may lead to erosion in our profit margins. We use foreign currency cylinder transactions to hedge a material portion, but not all of this currency exposure, to be contained within a pre-defined fixed range. In addition, we executed swap hedging transactions to fully hedge our exposure to the fluctuation of USD against the NIS as far as it relates to our non-convertible Series G debentures which are denominated in NIS.

The majority of TPSCo's revenues are denominated in JPY and the majority of the expenses of TPSCo are in JPY, which limits the exposure to fluctuations of the USD / JPY exchange rate on TPSCo’s results of operations as the impact on the revenues will be mostly offset by the impact on the expenses. In order to mitigate portion of the net exposure to the USD / JPY exchange rate over the net profit margins, we have entered-into-cylinder hedging transactions which limit our exposure to the currencies’ fluctuation to a pre-defined fixed range.

In addition to currency exchange fluctuations, we have exposure to interest rate fluctuations as Jazz, TJT and TPSCo’s borrowings under their respective credit facilities require payment of interest based on a floating LIBOR rate or TIBOR rate. Furthermore, if any of the respective banks incurs increased costs in financing the applicable credit facility due to changes in law or the unavailability of foreign currency, such bank may exercise its right to increase the interest rate on the credit facility or require us to bear such increased cost as provided for in the respective credit facility agreement.

We regularly engage in various hedging strategies to reduce our exposure to these risks and intend to continue to do so in the future. However, despite any such hedging activity, we are likely to remain exposed to interest rate increases (mainly LIBOR and TIBOR rates) and exchange rate fluctuations (mainly NIS and JPY rates as compared to the US dollar), which may have a material effect on our cost and financial results.

We depend on intellectual property to succeed in our business including intellectual property owned by us as well as intellectual property of third parties. Failure to enforce our intellectual property rights as well as failure to maintain or acquire licenses to intellectual property of third parties may harm our business.

We depend on intellectual property in order for us to provide certain foundry services and design support to our customers. As of December 31, 2016, we held 248 patents in force. We intend to continue to file patent applications when appropriate. The process of applying for patents to obtain patent protection may take a long time and be expensive. We cannot assure you that patents will be issued from pending or future applications or that, if patents are issued, they will not be challenged, invalidated or circumvented or that the rights granted under the patents will provide us with meaningful protection or any commercial advantage. In addition, we cannot assure you that other countries in which we market our services and products will respect our intellectual property rights to the same extent as the United States. Effective intellectual property enforcement may be unavailable or limited in some countries. We cannot assure you that we will, at all times, enforce our patents or other intellectual property rights and it may be difficult for us to protect our intellectual property from misuse or infringement by other companies in certain countries. Further, we cannot assure you that courts will uphold our intellectual property rights or enforce the contractual arrangements that we have entered into to protect our proprietary technology, which may reduce our opportunities to generate revenues. In the event that we are unable to enforce our intellectual property rights, our business may be harmed.

In addition, with respect to third party intellectual property that is required for the manufacture of our products, if problems or delays arise with respect to the timely development, quality and provision thereof to us, the design and production of our customers' products may be delayed, resulting in underutilization of our capacity. If any of our intellectual property vendors goes out of business, liquidates, merges with, or is acquired by, another company that discontinues the vendor's previous line of business, or if we fail to maintain or acquire licenses to such intellectual property for any other reason, our business may be adversely affected.

From time to time, we are a party to litigation which may require management time and effort and adversely affect us by harming our business, image and financials.

From time to time, we are a party to litigation incidental to the conduct of our ongoing business, including class actions, disputes with customers, suppliers, landlords, or other third parties. Litigation usually requires a certain amount of management time and effort which may adversely affect our business by diverting management focus from business needs and development of future strategic opportunities.

In addition, our ability to compete successfully depends in part on our ability to operate without infringing on the proprietary rights of others and defending our intellectual property rights. Because of the complexity of the technologies used and the multitude of patents, copyrights and other overlapping intellectual property rights, it is often difficult for semiconductor companies to determine infringement. Therefore, the semiconductor industry is characterized by frequent litigation regarding patent, trade secret and other intellectual property rights. We have been subject to intellectual property claims from time to time, some of which have been resolved through license agreements, the terms of which have not had a material effect on our business.

We may also be a party to infringement claims in the future. In the event any third party were to assert infringement claims against us or our customers, we may have to consider alternatives including, but not limited to:

- negotiating cross-license agreements;
- acquiring licenses to the allegedly infringed patents, which may not be available on commercially reasonable terms, if at all;
- discontinuing use of certain process technologies, architectures, or designs, which could cause us to stop manufacturing certain integrated circuits if we are unable to design around the allegedly infringed patents;
- litigating the matter in court, incurring substantial legal fees and paying substantial monetary damages in the event we lose; or
- developing non-infringing technologies, which may not be feasible.

Any one or several of these alternatives may place substantial financial and other burdens on us and hinder our business. Litigation, which may result in substantial costs to us and diversion of our resources, may be necessary to enforce our patents or other intellectual property rights or to defend us or our customers against claimed infringement. If we fail to obtain certain licenses or if we will be involved in litigation relating to alleged patent infringement or other intellectual property matters, it may prevent us from manufacturing particular products or using particular technologies, which may reduce our opportunities to generate revenues.

Specifically with respect to the restructure of our activities and business in Japan, the cessation of the Nishiwaki fab operations in 2014, may result in future claims from vendors, employees' unions or other third parties, which may negatively impact our financial results.

Furthermore, in January 2016, a short-selling focused firm issued a short sell thesis report which we believe contains false and misleading information about our strategy, business model and financials. Following this short sell thesis report, shareholder class actions were filed against the Company, certain of its officers, directors and its external independent auditor in the US and Israel. This short sell thesis analyst acknowledged at the time of the report that he shall be assumed to be in a short position in Tower's shares. In July 2016, the US court-appointed lead plaintiff voluntarily withdrew the action and the US court approved the voluntary dismissal of the class action in the US. We believe the outstanding alleged claims in Israel, which are largely akin to the claims made and dismissed in the US, have no merit and will vigorously defend such actions if the court ultimately accepts such action as a class action.

We could be harmed by failure to comply with environmental regulations.

Our business is subject to a variety of laws and governmental regulations in Israel, the U.S. and Japan relating to the use, discharge and disposal of toxic or otherwise hazardous materials used in Tower's production processes in Israel, in Jazz's production processes in California, TJT's production processes in Texas and in TPSCo's facilities in Japan. If we fail to use, discharge or dispose of hazardous materials appropriately, or if applicable environmental laws or regulations change in the future, we may be subject to substantial liability or may be required to suspend or significantly modify our manufacturing operations.

We are subject to risk of loss due to fire because the materials we use in our manufacturing processes are highly flammable.

We use highly flammable materials such as silane and hydrogen in our manufacturing processes and are therefore subject to risk of loss arising from fire. The risk of fire associated with these materials cannot be completely eliminated. Although we maintain insurance policies to reduce potential losses that may be caused by fire, including business interruption insurance, our insurance coverage may not be sufficient to cover all of our potential losses due to a fire. If any of our fabs were to be damaged and/or cease operations as a result of a fire, and if our insurance proves to be inadequate, it may reduce our manufacturing capacity and revenues. In addition, a power outage, even of very limited duration, caused by a fire or otherwise may result in a loss of wafers in production, deterioration of our fab yield, substantial downtime to reset equipment before resuming production and an adverse effect on our revenue and profits.

Possible product returns could harm our business.

Products manufactured by us may be returned within specified periods if they are defective or otherwise fail to meet customers' prior agreed upon specifications. Although product returns have historically been less than 1% of revenues, future product returns in greater amounts may have an adverse effect on our business and financial results.

We are subject to risks related to our international operations.

We have generated our revenues from customers located in the US, Europe and Asia-Pacific. Because of our international operations, we are vulnerable to the following risks:

- JPY fluctuations against the USD, see above risk factor "Our exposure to currency exchange and interest rate fluctuations may impact our costs and financial results";
- the burden and cost of compliance with foreign government regulation, as well as compliance with a variety of foreign laws and potential new legislation under the Trump administration;
- general geopolitical risks, such as political and economic instability, international terrorism, potential hostilities and changes in diplomatic and trade relationships;
- natural disasters affecting the countries in which we conduct our business;
- imposition of regulatory requirements, tariffs, import and export restrictions and other trade barriers and restrictions, including the timing and availability of export licenses and permits;
- adverse foreign and international tax rules and regulations, such as withholding taxes deducted from amounts due to us may not be refunded to us by the tax authorities since we are not entitled to foreign tax credit in Israel;
- weak protection of our intellectual property rights in certain foreign countries;
- delays in product shipments due to local customs' restrictions;
- laws and business practices favoring local companies;
- difficulties in collecting accounts receivable; and
- difficulties and costs of staffing and managing foreign operations.

21

In addition, Israel, the United States, Japan and other foreign countries may implement quotas, duties, taxes or other charges or restrictions upon the importation or exportation of our products, leading to a reduction in sales and profitability in that country. The geographical distance between Israel, the United States, Japan and the rest of Asia and Europe also creates certain logistical and communication challenges. We cannot assure you that we will be able to sufficiently mitigate all the risks related to our international operations.

Our business could suffer if we are unable to retain and recruit qualified personnel.

We depend on the continued services of our senior executive officers, senior managers and skilled technical and other personnel. Our business could suffer if we lose the services of some of these personnel due to resignation, medical absence, illness or other reasons, and cannot find and integrate adequate replacement personnel into our senior management, business and operations in a timely manner. We seek to recruit highly qualified personnel and there is intense competition for the services of these personnel in the semiconductor industry. Competition for personnel may increase significantly in the future as new fabless semiconductor companies as well as new semiconductor manufacturing facilities are established. Our ability to retain existing personnel and attract new personnel is in part dependent on the compensation packages we offer. As demand for qualified personnel increases, we may be forced to increase the compensation levels and to adjust the cash, equity and other components of compensation we offer our personnel.

Our business forecasts are premised on the increasing use of outsourced foundry services by both fabless semiconductor companies and integrated device manufacturers. Our business may not meet our forecasts if this trend does not continue to develop in the manner we expect.

We operate as an independent semiconductor foundry focused primarily on specialty process technologies. Our business model assumes that demand for these processes within the semiconductor industry will grow and follow the broader trend towards outsourcing foundry operations. If the broader trend to outsourced foundry services does not prove applicable to the specialty process technologies that we are focused on, our business and financial results may not meet our forecasts.

If we are unable to collaborate successfully with electronic design automation vendors and third-party design service companies to meet our customers' design needs, our business may be harmed.

We have established relationships with electronic design automation vendors and third-party design service companies. We work together with these vendors to develop complete design kits that our customers can use to meet their design needs using our process technologies. Our ability to meet our customers' design needs successfully, including their schedule and budget requirements, depends in part on the availability and quality of the relevant services, tools and intellectual property provided by electronic design automation vendors and design service providers. Difficulties or delays in these areas may adversely affect our ability to meet our customers' needs, and thereby harm our business.

Failure to comply with existing or future governmental regulations may reduce our sales or increase our manufacturing costs.

The export of semiconductors that we manufacture may be subject to U.S., Israeli and/or Japanese export control and other regulations established by other countries. Failure to comply with existing or evolving U.S., Israeli, Japanese or other applicable governmental regulation or to obtain timely domestic or foreign regulatory approvals or certificates may materially harm our business by reducing our sales, requiring extensive modifications to processes that we use in our product manufacturing, or requiring extensive modifications to our customers' products. We may not export products using or incorporating controlled technology without obtaining an export license. These restrictions may make foreign competitors facing less stringent controls on the export of their products more competitive in the global

market. The relevant government may not approve any pending or future export license requests. In addition, the list of products and countries for which export approval is required, and the regulatory policies with respect thereto, may be modified from time to time.

If certain of the integrated circuits we manufacture are defective and integrated into products, we may be subject to product liability claims or other claims which could damage our reputation and harm our business.

Our customers integrate our custom integrated circuits into their products which they then sell to end users. If these products are defective or malfunction, we may be subject to product liability claims, as well as possible recalls, safety alerts or advisory notices relating to the product. We cannot assure you that our insurance policies will be adequate to satisfy claims that may be made against us. Also, we may be unable to obtain insurance in the future at satisfactory rates, with adequate coverage, or at all. Product liability claims or product recalls in the future, regardless of their ultimate outcome, may have a material adverse effect on our business, reputation, financial condition and our ability to attract and retain customers.

A significant portion of Fab 3 and TPSCo's workforce is unionized, and their operations may be adversely affected by work stoppages, strikes or other collective actions which may disrupt their production and adversely affect the yield of their fabs.

A significant portion of Fab 3's employees at the Newport Beach, California fab are represented by a union and covered by a collective bargaining agreement, which was renewed for three additional years, effective as of July 1, 2015. Similarly, a significant portion of TPSCo's employees at its fabs in Japan are represented by a union and covered by a collective bargaining agreement. We cannot predict the effect that continued union representation or future organizational activities will have on these fabs' business. Specifically under TPSCo's collective bargaining agreement, the union and the company are required to first negotiate any points of dispute before taking any action such as work stoppages, strikes or other collective actions. We cannot assure you that Fab 3 and TPSCo's fabs will not experience a material work stoppage, strike or other collective action in the future, which may disrupt their production and adversely affect our customer relations and operational and financial results.

Our production yields and business could be significantly harmed by natural disasters, particularly earthquakes.

Fab 1 and Fab 2 are located in an area near the Syrian-African rift valley, which is known to have seismic activity. Fab 3 is located in southern California, a region known for seismic activity. TPSCo's fabs are located in Japan, which is generally susceptible to seismic activity. Due to the complex and delicate nature of our manufacturing processes, our facilities are particularly sensitive to the effects of vibrations associated with even minor earthquakes. Our business operations depend on our ability to maintain and protect our facilities, computer systems and personnel. We cannot be certain that precautions that any of our fabs have taken to seismically upgrade the fabs will be adequate to protect our facilities in the event of an earthquake. Earthquakes may lead to fire in the fabs or other material damage, and any resulting damage could seriously disrupt production and result in reduced revenues. Although we maintain insurance policies to reduce potential losses that may be caused by earthquakes and other natural disasters, including business interruption insurance, our insurance coverage may not be sufficient to cover all of our potential losses. If any of our fabs were to be damaged or cease operations as a result thereof, and if our insurance proves to be inadequate, it may reduce our manufacturing capacity and revenues and may expose us to third party claims. A power outage, even of very limited duration, caused by an earthquake or other natural disaster may result in a loss of wafers in production, deterioration of our fab yield and substantial downtime to reset equipment before resuming production, and any such losses or damages incurred by us may have a material adverse effect on our business, revenue and profits.

Climate change may negatively affect our business.

There is increasing concern that climate change is occurring and may have dramatic effects on human activity if no aggressive remediation steps are taken. Legislative developments with respect to reductions in greenhouse gas emissions may 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 increased production costs due to increase in the prices of energy and introduction of energy or carbon tax. A variety of 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 new equipment at higher costs or raw materials with lower carbon footprints. These developments and further legislation that is likely to be enacted may adversely affect our operations. Changes in environmental regulations, such as those on the use of per fluorinated compounds, may increase our production costs, which may adversely affect our results of operation and financial condition.

In addition, more frequent droughts and floods, extreme weather conditions and rising sea levels may occur due to climate change. For example, transportation suspension caused by extreme weather conditions, including snow storms, may harm the distribution of our products. We cannot predict the economic impact, if any, of disasters resulting from climate change.

Compliance with the US Conflict Minerals Law may affect our ability or the ability of our suppliers to purchase raw materials at an effective cost.

Many industries rely on materials which are subject to regulation concerning certain minerals sourced from the Democratic Republic of Congo ("DRC") or adjoining countries, which include Sudan, Uganda, Rwanda, Burundi, United Republic of Tanzania, Zambia, Angola, Congo, and Central African Republic. These minerals are commonly referred to as conflict minerals. Conflict minerals which may be used in our industry or by our suppliers include Columbite-tantalite (derivative of tantalum [Ta]), Cassiterite (derivative of tin [Sn]), gold [Au], Wolframite (derivative of tungsten [W]), and Cobalt [Co]. We comply with the annual disclosure and reporting requirements adopted by the SEC with respect to use of conflict minerals mined from the DRC and adjoining countries. There may be costs associated with complying with these disclosure requirements, including 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. Although we expect that we and our vendors will be able to continue to comply with these requirements, there can be no guarantee that we will be able to gather all the required information from our vendors. Although we believe our suppliers do not rely on such conflict minerals, either because the suppliers are located outside of the DRC and adjoining countries, or because our suppliers have been certified as “conflict-free” by an internationally-recognized validation scheme, there can be no guarantee that we will continue to be able to obtain adequate supplies of materials needed for our production from such suppliers. A failure to obtain necessary information or maintain adequate supplies of materials from supply chains outside the DRC and adjoining countries, or that have been certified as “conflict-free” by an internationally-recognized validation scheme, may delay our production, increasing the risk of losing customers and business.

Risks relating to construction activities adjacent to Fab 3 and its fabrication facility lease.

Jazz leases its fabrication facilities and offices under lease contracts that Jazz can extend until 2027, through the exercise of an option at Jazz's sole discretion to extend the lease period from 2022 to 2027. A few years ago, the landlord began a construction project adjacent to the fabrication facility. It is possible that said project may adversely impact Jazz, including that construction activities adjacent to Jazz's fabrication facility may result in temporary reductions or interruptions in the supply of utilities to the property and that a portion or all of the fabrication facility may need to be idled temporarily during development. If construction activities limit or interrupt the supply of water, gas or electricity to Fab 3 or cause significant vibrations or other disruptions, it could limit or delay Fab 3's production, which may adversely affect our business and operating results. In addition, an unplanned power outage caused by construction activities, even of very limited duration, may result in a loss of wafers in production, deterioration in Fab 3's yield and on schedule delivery and substantial downtime to reset equipment before resuming production, which may cause customer dissatisfaction and cause customers to contemplate transferring their product orders to other fabs, which may adversely affect our revenues and financial results. In addition, the lease amendment sets forth certain obligations of Jazz and the landlord, including certain noise abatement actions at the fabrication facility.

Risks Related to Our Securities

Fluctuations in the market price of our traded securities may significantly affect our ability to raise new capital.

The capital markets, in general, have experienced volatility that often has been unrelated to the operating performance of the traded companies. The share price of many companies in the semiconductor industry has experienced wide fluctuations, which has often been unrelated to the operating performance of such companies. These broad market and industry fluctuations may adversely affect the market price of Tower's equity and debt traded securities, regardless of Tower's actual operating performance.

In addition, it is possible that Tower's operating results may differ from the expectations of public market analysts and investors, which may adversely affect the price of Tower's securities. Adverse impact to the market price of Tower's securities may negatively impact our ability to raise new capital in order to finance our growth plans, obligations and liabilities and/or re-finance our debt, and/or may cause us to receive less favorable terms than expected to the extent we will decide to raise any capital.

Market sales of Tower's shares or conversion or exercise of a material portion of securities into shares or issuance of new ordinary shares, or even the perception that any such action may occur, may depress the market price of Tower's shares, impair our ability to raise future capital through the financial markets and may limit our ability to fund our growth plans, debt and other liabilities.

Market sales of Tower's shares, or a conversion or exercise of a material portion of our convertible securities (including notes, warrants and options), or issuance of new ordinary shares, or even the perception that such sales, conversions, exercises or issuances may occur, could depress the market price of Tower's ordinary shares, may impair our ability to raise capital, and may limit our ability to fund our growth plans and service our debt and other liabilities.

Any inability to comply with Section 404 of the Sarbanes–Oxley Act of 2002 regarding internal control attestation or any SEC filing requirement may adversely affect our financial position.

We are subject to the reporting and filing requirements of the United States Securities and Exchange Commission ("SEC"). The SEC, as directed by Section 404(a) of the United States Sarbanes–Oxley Act of 2002, adopted rules requiring public companies to include a management report assessing the company's effectiveness of internal control over financial reporting and an attestation thereof by its auditors in its annual report. Our management and/or our auditors may conclude that our internal controls over financial reporting are not effective. Such a conclusion may

result in a loss of investor confidence in the reliability of our financial statements, which may negatively impact us and our ability to access the capital markets. In addition, we are required to file reports and other information with the SEC under the Securities Exchange Act of 1934 and the regulations thereunder applicable to foreign private issuers. Failure by us to file reports and other information with the SEC under the Securities Exchange Act of 1934 and the regulations thereunder may result in a deficiency and may negatively impact our financial position.

Risks Related to Our Operations in Israel

Instability in Israel may harm our business.

Fab 1 and Fab 2 manufacturing facilities, Tower's design center and certain of Tower's corporate and sales offices are located in Israel. Accordingly, political, economic and military conditions in Israel may directly affect our business.

Since the establishment of the State of Israel in 1948, Israel has been and is subject to armed conflict with neighboring states and terrorist activity, with varying levels of severity. Parties with whom we do business have sometimes declined to travel to Israel during periods of heightened unrest or tension, forcing us to make alternative arrangements where necessary. In addition, the political and security situation in Israel may result in parties with whom we have agreements claiming that they are not obligated to perform their commitments under those agreements pursuant to force majeure provisions. We can give no assurance that security and political conditions will not adversely impact our business in the future. Any hostilities involving Israel or the interruption or curtailment of trade between Israel and its present trading partners may adversely affect our operations and make it more difficult for us to do business and raise capital. Furthermore, we could experience serious disruption to our manufacturing in Israel if acts associated with said conflict result in any serious damage to said manufacturing facilities. In addition, our business interruption insurance may not adequately compensate us for losses that we may incurred, and any losses or damages incurred by us may have a material adverse effect on our business.

In the event of severe unrest or other conflict, Israeli personnel could be required to serve in the military for extended periods of time. In response to increases in terrorist activity, there have been periods of significant call-ups of Israeli military reservists, and it is possible that there will be additional call-ups in the future. Many male Israeli citizens, including most of Tower's male employees under the age of 40, are subject to compulsory military reserve service and may be called to active duty under emergency circumstances. Our operations in Israel could be disrupted by the absence, for a significant period of time, of one or more of our key employees or a significant number of our other employees due to military service. Such disruption may harm our operations and/or our business.

If the exemption allowing us to operate our Israeli manufacturing facilities seven days a week and /or our business license is not renewed, our business may be adversely affected.

We operate our Israeli manufacturing facilities seven days a week pursuant to an exemption (which we need to renew every year) from the law that requires businesses in Israel to be closed from sundown on Friday evening through sundown on Saturday evening ("Saturday Exemption"). In addition, our business license certificate issued by Migdal Ha'emek municipality needs to be renewed annually. If our Saturday Exemption and/or our business license are not renewed in the future, our financial results and business may be harmed.

It may be difficult to enforce a US judgment against us, our officers, directors and advisors or to assert US securities law claims in Israel.

Tower is incorporated in Israel. Most of Tower's executive officers and directors are not residents of the United States (excluding the employees of its U.S. subsidiaries), and a majority of Tower's assets (excluding its U.S. subsidiaries and their assets) are located outside the United States. Therefore, a judgment obtained in the United States against Tower or any of our executive officers and directors, including one based on the civil liability provisions of the U.S. federal securities laws, may not be collectible in the United States (except to the extent that it relates to Tower's US subsidiaries, its assets or employees) and may not be enforced by an Israeli court. Additionally, it may be difficult to enforce civil liabilities under U.S. federal securities laws claimed in original actions instituted in Israel.

Provisions of Israeli law may delay, prevent or otherwise impede a merger with, or an acquisition of, our company, which may prevent a change of control, even when the terms of such a transaction are favorable to us and our shareholders.

Israeli corporate law regulates mergers, requires tender offers for acquisitions of shares above specified thresholds, requires special approvals for transactions involving directors, officers or significant shareholders and regulates other matters that may be relevant to such types of transactions. For example, a merger may not be consummated unless at least 50 days have passed from the date on which a merger proposal is filed by each merging company with the Israel Registrar of Companies and at least 30 days have passed from the date on which the shareholders of both merging companies have approved the merger. In addition, a majority of each class of securities of the target company must approve a merger. Moreover, a tender offer for all of a company's issued and outstanding shares can only be completed if the acquirer receives positive responses from the holders of at least 95% of the issued share capital. Completion of the tender offer also requires approval of a majority of the offerees that do not have a personal interest in the tender offer, unless, following consummation of the tender offer, the acquirer would hold at least 98% of Tower's outstanding shares. Furthermore, the shareholders, including those who indicated their acceptance of the tender offer, may, at any time within six months following the completion of the tender offer, claim that the consideration for the acquisition of the shares does not reflect their fair market value, and petition an Israeli court to alter the consideration for the acquisition accordingly, unless the acquirer stipulated in its tender offer that a shareholder that accepts the offer may not seek such appraisal rights, and the acquirer or the company published all required information with respect to the tender offer prior to the tender offer's response date. Furthermore, Israeli tax considerations may make potential transactions unappealing to Tower or to its shareholders whose country of residence does not have a tax treaty with Israel exempting such shareholders from Israeli tax. These and other similar provisions may delay, prevent or impede a merger with or an acquisition of our company, even if such a merger or acquisition would be beneficial to Tower or its shareholders.

The rights and responsibilities of Tower's shareholders will be governed by Israeli law which differs in some material respects from the rights and responsibilities of shareholders of U.S. companies.

The rights and responsibilities of the holders of Tower's ordinary shares are governed by its articles of association and by Israeli law. These rights and responsibilities differ in some material respects from the rights and responsibilities of shareholders in typical U.S. registered corporations. In particular, a shareholder of an Israeli company has certain duties to act in good faith and fairness towards the company and other shareholders, and to refrain from abusing its power in the company. There is limited case law available to assist Tower shareholders in understanding the nature of this duty or the implications of these provisions. These provisions may be interpreted to impose additional obligations and liabilities on holders of Tower's ordinary shares that are not typically imposed on shareholders of U.S. corporations.

ITEM 4. INFORMATION ON THE COMPANY

A. HISTORY AND DEVELOPMENT OF THE COMPANY

We are a pure-play independent specialty foundry dedicated to the manufacture of semiconductors. Typically, pure-play foundries do not offer products of their own, but focus on producing integrated circuits, or ICs, based on the design specifications of their customers. We manufacture semiconductors for our customers primarily based on third party designs. We currently offer the process manufacture geometries of 0.35, 0.50, 0.55, 0.60, 0.80-micron and above on 150-mm wafers and 0.35, 0.18. 0.16, 0.13 and 0.11-micron on 200-mm wafers and 65 nanometer and 45 nanometer on 300-mm wafers. We also provide design support and complementary technical services. ICs manufactured by us are incorporated into a wide range of products in diverse markets, including consumer electronics, personal computers, communications, automotive, industrial and medical device products.

We are focused on establishing leading market share in high-growth specialized markets by providing our customers with high-value wafer foundry services. Our historical focus has been standard digital complementary metal oxide semiconductor ("CMOS") process technology, which is the most widely used method of producing ICs. We are currently focused on the emerging opportunities in specialized technologies including CMOS image sensors, wireless antenna switch Silicon-on-Insulator (SOI), mixed-signal, radio frequency CMOS (RFCMOS), bipolar CMOS (BiCMOS), and silicon-germanium BiCMOS (SiGe BiCMOS or SiGe), high voltage CMOS, radio frequency identification (RFID) technologies, MEMS and power management. To better serve our customers, we have developed and are continuously expanding our technology offerings in these fields. Through our experience and expertise gained over more than twenty years of operation, we differentiate ourselves by creating a high level of value for our clients through innovative technological processes, design and engineering support, competitive manufacturing indices, and dedicated customer service.

Tower was founded in 1993, with the acquisition of National Semiconductor's 150-mm wafer fabrication facility located in Migdal Haemek, Israel, and commenced operations as an independent foundry. Since then, we have significantly upgraded our Fab 1 facility, equipment, capacity and technological capabilities with process geometries ranging from 1.0-micron to 0.35-micron and enhanced our process technologies to include CMOS image sensors, embedded flash, advanced analog, RF (radio frequency) and mixed-signal technologies.

In 2003, we commenced production in Fab 2, a wafer fabrication facility we established in Migdal Haemek, Israel. Fab 2 supports geometries ranging from 0.35 to 0.13-micron, using advanced CMOS technology, including CMOS image sensors, embedded flash, advanced analog, RF (radio frequency), power platforms and mixed-signal technologies.

In September 2008, we merged with Jazz. Jazz focuses on specialty process technologies for the manufacture of analog and mixed-signal semiconductor devices, and supports geometries ranging from 0.50 to 0.13-micron. Jazz's specialty process technologies include advanced analog, radio frequency, high voltage, bipolar and silicon germanium bipolar complementary metal oxide ("SiGe") semiconductor processes. ICs manufactured by Jazz are incorporated into a wide range of products, including cellular phones, wireless local area networking devices, digital TVs, set-top boxes, gaming devices, switches, routers and broadband modems. Jazz operates Fab 3.

In June 2011, we acquired Fab 4 from Micron. The assets and related business that we acquired from Micron were held and conducted through a wholly owned Japanese subsidiary, TJP. In 2014, the operations of Fab 4 ceased in the course of restructuring our activities and business in Japan and during the second half of 2016, TJP completed its dissolution.

In March 2014, we acquired from Panasonic 51% of a newly established company, TPSCo, that manufactures products for Panasonic and other third party customers, using Panasonic's three semiconductor manufacturing facilities located in Hokuriku Japan (Uozu E, Tonami CD and Arai E). Pursuant to the transaction, Panasonic transferred its semiconductor wafer manufacturing process and capacity tools (8 inch and 12 inch) at said three fabs to TPSCo, and entered into a five-year manufacturing agreement for the manufacture of products for Panasonic by TPSCo.

In February 2016, we acquired Fab 9 from Maxim. The assets and related business that we acquired from Maxim are held and conducted through a wholly owned US subsidiary, TJT. Fab 9 supports process geometries ranging from 0.18 to 0.8 for the manufacture of products using CMOS and analog based technologies.

Our executive offices and Israeli manufacturing facilities are located in the Ramat Gavriel Industrial Park, Shaul Amor Street, Post Office Box 619, Migdal Haemek, 2310502 Israel, and our telephone number is 972-4-650-6611. Our agent for service of process in the United States is Tower Semiconductor USA, Inc. located at 2570 North First Street, Suite 480 San Jose, CA 95131.

For more information about us, go to www.towerjazz.com. Information on our web site is not incorporated by reference in this annual report.

B. BUSINESS OVERVIEW

INDUSTRY OVERVIEW

PROLIFERATION OF ANALOG AND MIXED-SIGNAL SEMICONDUCTORS AND THE GROWING NEED FOR SPECIALTY PROCESS TECHNOLOGIES

Semiconductor devices are responsible for the rapid growth of the electronics industry over the past fifty years. They are critical components in a variety of applications, from computers, consumer electronics and communications, to industrial, military, medical and automotive applications. Rapid changes in the semiconductor industry frequently make recently introduced devices and applications obsolete within a very short period of time. With the increase in their performance and decrease in their size and cost, the use of semiconductors and the number of their applications have increased significantly.

Historically, the semiconductor industry was composed primarily of companies that designed and manufactured ICs in their own fabrication facilities. These companies, such as Intel and Samsung, are known as integrated device manufacturers, or IDMs. In the mid-1980s, fabless IC companies, which focused on IC design and used external manufacturing capacity, began to emerge. Fabless companies initially outsourced production to IDMs, which filled this need through their excess capacity. As the semiconductor industry continued to grow, increasing competition forced fabless companies and IDMs to seek reliable and dedicated sources of IC manufacturing services. Use of external manufacturing capacity allowed IDMs to reduce their investment in their existing and next-generation manufacturing facilities and process technologies. This need for external manufacturing capacity led to the development of independent companies, known as foundries, which focus primarily on providing IC manufacturing services to semiconductor suppliers. Foundry services are used by nearly all major semiconductor companies in the world, including IDMs, as part of a dual-source, risk-diversification and cost effectiveness strategy.

Semiconductor suppliers face increasing demands for new products that provide higher performance, greater functionality and smaller form factors at lower prices - all features that require increasingly complex ICs. The industry has experienced a dramatic increase in the number of applications that incorporate semiconductors. Further, in order to compete successfully, semiconductor suppliers must minimize the time it takes to bring a product to market. As a result, fabless companies and IDMs have focused more on their core competencies, design and intellectual property, and tend to outsource manufacturing to foundries.

29

The two basic functional technologies for semiconductor products are digital and analog. Digital semiconductors provide critical processing power and have helped enable many of the computing and communication advances of recent years. Analog semiconductors monitor and manipulate real world signals such as sound, light, pressure, motion, temperature, electrical current and radio waves, for use in a wide variety of electronic products such as digital still cameras, x-ray medical applications, flat panel displays, personal computers, cellular handsets, telecommunications equipment, consumer electronics, automotive electronics and industrial electronics. Analog-digital, or mixed-signal, semiconductors combine analog and digital devices on a single chip which can process both analog and digital signals.

Integrating analog and digital components on a single, mixed-signal semiconductor enables the development of smaller, more highly integrated, power-efficient, feature-rich and cost-effective semiconductor devices but presents significant design and manufacturing challenges. For example, combining high-speed digital circuits with sensitive analog circuits on a single, mixed-signal semiconductor can increase electromagnetic interference and power consumption, both of which cause a higher amount of heat to be dissipated and decrease the overall performance of the semiconductor. Challenges associated with the design and manufacture of mixed-signal semiconductors increase as the industry moves toward more advanced process geometries. As a result, analog and mixed-signal semiconductors can be complex to manufacture and typically require sophisticated design expertise and strong application specific experience and intellectual property. In addition, today's analog market is driven strongly by growing sensitivity to environmental requirements such as the conservation of energy, and human well being. This is seen in applications related to the Internet of Things (IoT) in particular in products with embedded sensors, medical devices, applications focused on entertainment, infotainment and safety, all developed using analog technology.

Mixed-signal ICs are an essential part of any front-end electronic system. Our advanced analog CMOS process technologies have more features than standard analog CMOS process technologies and are well suited for higher performance or more highly integrated analog and mixed-signal semiconductors, such as high-speed analog-to-digital or digital-to-analog converters and mixed-signal semiconductors with integrated data converters. These process technologies generally incorporate higher density passive components, such as capacitors and resistors, as well as improved active components, such as native or low voltage devices, and improved isolation techniques, into standard analog CMOS process technologies.

The enormous costs associated with modern fabs, combined with the increasing demand for complex ICs, has created an expanding market for outsourced foundry manufacturing. Foundries can cost-effectively supply advanced ICs to even the smallest fabless companies by creating economies of scale through pooling the demand of numerous customers. In addition, customers whose IC designs require process technologies other than standard digital CMOS have created a market for independent foundries that focus on providing specialized process technologies. Specialty process technologies enable greater analog content and can reduce the die size of an analog or mixed-signal semiconductor, thereby increasing the number of dies that can be manufactured on a wafer and reducing final die cost. In addition, specialty process technologies can enable increased performance, superior noise reduction and improved power efficiency of analog and mixed-signal semiconductors compared to traditional standard CMOS processes. These specialty process technologies include advanced analog CMOS, specialized RF devices on SOI, radio frequency CMOS (RF CMOS), CMOS image sensors (CIS) and other types of original sensors , high voltage CMOS, bipolar CMOS (BiCMOS), silicon germanium BiCMOS (SiGe BiCMOS), and bipolar CMOS double-diffused metal oxide semiconductor (BCD).We have mastered the skills required to work in this technology intensive environment which is rapidly changing. We work closely with our customers to provide them with unique and specialized solutions needed for their business success.

Foundries also offer competitive customer service through design, testing, and other technical services.

MANUFACTURING PROCESSES AND SPECIALIZED TECHNOLOGIES

We manufacture ICs on silicon wafers, generally using the customer's proprietary circuit designs. In some cases, we provide our customers with third-party design elements or our own proprietary design elements. The end product of our manufacturing process is a silicon wafer containing multiple identical ICs. In most cases, our customer assumes responsibility for dicing, assembly, packaging and testing.

We provide wafer fabrication services to fabless IC companies and IDMs, as sole source or second source, and enable smooth integration of the semiconductor design and manufacturing processes. By doing so, we enable our customers to bring high-performance, highly integrated ICs to market rapidly and cost effectively. We believe that our technological strengths and emphasis on customer service have allowed us to develop a unique position in large, high-growth specialized markets for CMOS image sensors, RF, power management and high performance mixed signal ICs.

We manufacture using specialty process technologies, mostly based on CMOS process platforms with added features to enable special and unique functionality, improved size, performance and cost characteristics for analog and mixed-signal semiconductors. Products made with our specialty process technologies are typically more complex to manufacture than products made using standard process technologies employing similar line widths. Generally, customers that use our specialty process technologies cannot easily transfer designs to another foundry because the analog characteristics of the design are dependent upon the specific process technology used for manufacturing. The specialty process design infrastructure is complex and includes design kits and device models that are specific to the foundry in which the process is implemented and to the process technology itself. In addition, the relatively small engineering community with specialty process expertise and the significant investment required for development or transfer and maintenance of specialty process technologies has limited the number of foundries capable of offering specialty process technologies. We believe that our specialized process technologies combined with design enablement capabilities distinguish our IC manufacturing services and attract industry-leading customers.

We also offer process transfer services to integrated device manufacturers (IDMs) who wish to manufacture products using their own process and do not have sufficient capacity in their own fabs. Existing or new fabs may engage us for such services in order to expand their technology offerings. Our process transfer services are also used by fabless companies that have proprietary process flows that they wish to manufacture at additional manufacturing sites for purposes of geographic diversity or require a new technology node which is very costly to build independent of other business commitments. Our process services include development, transfer, and extensive optimization as defined by customer needs.

With our world-class engineering team, well established transfer methodologies, and vast manufacturing experience, we offer state of the art production lines for core bulk CMOS and specialized technologies such as RF SOI9, back-end-of-line (BEOL) magnetic random access memory (MRAM) and MTJ (magnetic tunnel junction) sensors, SiGe and MEMS, among others. With a combination of well known intellectual property protection and capacity flexibility commitment, we ensure customer confidence and satisfaction for low-risk services and fast time-to-market.

We are a trusted, customer-oriented service provider that has built a solid reputation in the foundry industry over the last twenty years. We have built strong relationships with customers, who continue to use our services, even as their demands evolve to smaller form factors and new applications. Our consistent focus on providing high-quality, value added services, including engineering and design support, has allowed us to attract customers that seek to work with a proven provider of foundry solutions. Our emphasis on working closely with customers and accelerating the time-to-market of our customers' next-generation products has enabled us to maintain a high customer retention rate and increase the number of new customers and new products for production.

We derived a very significant amount of our revenues for the year ended December 31, 2016 from our target specialized markets: RF CMOS, power IC and discrete devices, CMOS image sensors , wireless communication and high performance analog . We are highly experienced in these markets, having been an early entrant and having developed unique proprietary technologies, including through licensing and joint development efforts with our customers and other technology companies.

The specific process technologies that we currently focus on include: radio frequency CMOS (RF CMOS), CMOS image sensors (CIS) and integration of other types of sensors, advanced analog CMOS, radio frequency identification (RFID), bipolar CMOS (BiCMOS), silicon germanium (SiGe BiCMOS), high voltage CMOS, silicon-on-insulator (SOI) , LDMOS transistors and power devices based on GaN (gallium nitride) technology.

CMOS Image Sensors

CMOS image sensors are ICs used to capture an image in a wide variety of consumer, communications, medical, automotive and industrial market applications, including camera-equipped cell phones, digital still and video cameras, security and surveillance cameras and video game consoles. Our dedicated manufacturing and testing processes assure consistently high electro-optical performance of the integrated sensor through wafer-level characterization. Our CMOS image sensor processes have demonstrated superior optical characteristics, excellent spectral response and high resolution and sensitivity. The ultra-low dark current, high efficiency and accurate spectral response of our photodiode enable faithful color reproduction and acute detail definition.

We are currently actively involved in the high-end sensor and applications specific markets, which include applications such as high end video, high end photography, industrial machine vision, dental x-ray, medical x-ray, automotive sensors, security sensors and three dimensional sensors for entertainment and industrial applications.

We recognized the market potential of using CMOS process technology for a digital camera-on-a-chip, which would integrate a CMOS image sensor, filters and digital circuitry. Upon entering the CMOS image sensor foundry business, we utilized research and development work that had been ongoing since 1993. Our services include a broad range of turnkey solutions and services, including silicon proven pixels services, optical characterization of a CMOS process, innovative patented stitching manufacturing technique and prototype packaging. The CMOS image sensors that we manufacture deliver outstanding image quality for a broad spectrum of digital imaging applications. Following the acquisition of TPSCo we are now offering even more advanced CMOS Image Sensor technology with technologies of 110nm on 200mm wafers and 65nm on 300mm wafers with pixel sizes down to 1.12 micron utilizing dual light pipe technology.

Having this technology, we are now offering our customers state of the art pixels for a variety of new markets such as the high end smart phone camera or the rapidly growing security camera markets.

Specifically, our CIS portfolio includes pixels ranging from 1.12 micron up to 150 micron, all developed by us. We provide both rolling shutter and global shutter pixels. The latter are used mainly in the industrial sensor and in the three dimensional sensors markets. Our advanced photo diode (APD) technology used in CMOS image sensors enables improved optical and electrical performance such as low dark current, low noise, high well capacity, high quantum efficiency and high uniformity of pixels utilizing deep sub-micron process technologies, thus enabling the manufacturing of very sophisticated and high performance camera module solutions.

For the X-ray market, we offer our innovative patented “stitching” technology on 0.18-micron process as well as on 65nm technology on 300mm wafers and a variety of 15 to 150-micron pixels that are optimized for X-ray applications. These pixels are used by our customers in dental and other medical X-ray products as well as in the industrial NDT (Not Destructive Testing) X-Ray market. Our stitching technology enables semiconductor exposure tools to manufacture single ultra high-resolution CMOS image sensors containing millions of pixels at sizes far larger than their existing field. This technology is also used by us in the manufacturing of large sensors (up to one die per wafer) on 8” and 12” wafers and high end large format sensors with special pixels that we have developed specifically for this market.

We recently developed our near Infra-Red imaging technology, specially developed for gesture recognition systems designed by leading world computer manufacturers and a series of spectrally sensitive image sensors, including proximity sensors and sensors sensitive in the UV range.

RF CMOS

In recent years, more and more designers opt to develop high frequency products based on RF CMOS technologies. The superior cost structure of CMOS technologies enables high volume, low cost production of high frequency products. We used our mixed signal expertise to leverage and develop processes and provide services for customers that utilize CMOS technologies and require high frequency performance.

Our RF CMOS process technologies have more features than advanced analog CMOS process technologies and are well suited for wireless semiconductors, such as highly integrated wireless transceivers, power amplifiers, and television tuners. These process technologies generally incorporate integrated inductors, high performance variable capacitors, or varactors, and RF laterally diffused metal oxide semiconductors into an advanced analog CMOS process technology. In addition to the process features, our RF offering includes design kits with RF models, device simulation and physical layouts tailored specifically for RF performance. We currently have RF CMOS process technologies in 0.25 micron, 0.18 micron, 0.13 micron and 65 nanometer.

Further, we have versions of our RF CMOS process built on silicon-on-insulator (SOI) substrates (RF SOI). These RF SOI process technologies include devices optimized to deliver higher performance and improved isolation relative to devices in our RF CMOS process. We currently have RF SOI process technologies in 0.18 micron,0.13 micron and 65 nanometer lithography nodes and fabricate various devices including antenna switches with record FOM (figure of merit) and front end modules. Corresponding chips can be found in various products, including state-of-the-art smart-phones, manufactured by leading manufacturers.

BiCMOS for RF and High Performance Analog

Our BiCMOS process technologies have more features than RF CMOS process technologies and are well suited for RF semiconductors, such as wireless transceivers and television tuners. These process technologies generally incorporate high-speed bipolar transistors into an RF CMOS process. The equipment requirements for BiCMOS manufacturing are specialized, and require enhanced tool capabilities to achieve high yield manufacturing.

Our SiGe BiCMOS process technologies have more features than BiCMOS processes and are well suited for more advanced RF and high performance analog semiconductors such as high-speed, low noise, highly integrated multi-band wireless transceivers, optical networking components, television tuners, automotive radar components, hard-disk drive pre-amplifiers, power amplifiers and low-noise amplifiers. These integrated circuits generally incorporate a silicon germanium bipolar transistor, which is formed by the deposition of a thin layer of silicon germanium within a bipolar transistor, to achieve higher speed, lower noise, and more efficient power performance than a BiCMOS process technology. It is also possible to achieve higher speed using SiGe BiCMOS process technologies equivalent to those demonstrated in standard CMOS processes that are two process generations smaller in line-width. For example, a 0.18 micron SiGe BiCMOS process is able to achieve speeds comparable to a 90 nanometer RF CMOS process. As a result, SiGe BiCMOS makes it possible to create analog products using a larger geometry process technology at a lower cost while achieving similar or superior performance to that achieved using a smaller geometry standard CMOS process technology. The equipment requirements for SiGe BiCMOS manufacturing are similar to the specialized equipment requirements for BiCMOS. We developed enhanced tool capabilities in conjunction with large semiconductor tool suppliers to achieve high yield SiGe manufacturing. We believe this equipment and related process expertise makes us one of the few integrated circuit manufacturers with demonstrated ability to deliver SiGe BiCMOS products. We currently have 0.35 micron, 0.18 micron and 0.13 SiGe BiCMOS micron technologies available.

Power and Power Management ICs

Our power technologies are generally divided into a low-voltage BCD offering and a 700V ultra-high voltage offering. Our low-voltage BCD process technologies have more features than advanced analog CMOS processes and are well suited for power and driver semiconductors, such as voltage regulators, battery chargers, power management products and audio amplifiers. These process technologies generally incorporate higher voltage CMOS devices such as 5V, 8V, 12V, 40V and 60V LDMOS devices, and, in the case of BCD, bipolar devices integrated into an advanced analog CMOS process. We currently have high voltage and low Rdson BCD offerings in 0.5 micron, 0.35 micron, 0.25 micron and 0.18 micron. We offer a cost effective and digital intensive power management platform, based on our 0.18um technology node with advanced isolation options that allow our customers to design high performance products as well as products with high levels of integration.

Our 700V ultra-high voltage platform supports the fast growing LED lighting market as well as serving the more established AC adaptor and motor driver markets.

In addition, we have developed a unique, zero mask adder NVM solution (Y-Flash) specifically for power and power management devices on our 0.18 micron platforms. We have developed a series of Y-flash based modules with record (for the single Poly embedded MTP technologies) memory densities of up to 16kbit, which have been integrated in various power management products of our customers.

We continue to invest in technology that improves performance and integration level and reduces the cost of analog and mixed-signal products. This includes improving the density of passive elements such as capacitors and inductors, including development of the new passive elements, improving the analog performance and voltage handling capability of active devices, and integrating additional advanced features in our specialty CMOS processes. Examples of such technologies currently under development include GaN technologies and technologies aimed at integrating

micro-electro-mechanical-system (MEMS) devices with CMOS and scaling the features we offer today to the 0.13 micron process, including the integration of advanced SiGe transistors with 0.13 micron CMOS and copper metallization.

CUSTOMERS, MARKETING AND SALES

Our marketing and sales strategy seeks to further solidify our position as the global specialty foundry leader, by increasing our market share at existing customers and aggressively expanding our global customer base. We have marketing, sales, design support engineers, application engineers and customer support personnel in the United States, Korea, Taiwan, Japan, China and Israel. In selected markets, including Europe, South America, Japan and India our marketing and sales staff is supported by independent sales representatives, who have been selected based on their industry experience, customer relationships and understanding of the semiconductor marketplace.

Our sales cycle is generally 8 to 26 months or longer for new customers and can be as short as 8 to 12 months for existing customers. The typical stages in the sales cycle process from initial contact until production are:

·technical evaluation;

. product design to our specifications, including integration of third party intellectual property;

·photomask - design and third party photomask manufacturing;

·silicon prototyping;

·assembly and test;

·validation and qualification; and

·production.

The primary customers of our foundry and design services are fabless semiconductor companies and Integrated Device Manufacturers (IDMs). A portion of our product sales are made pursuant to long-term contracts with our customers, under which we agree to reserve manufacturing capacity at our production facilities for such customers. Our customers include many analog and mixed-signal industry leaders, serving a variety of end market segments. During the year ended December 31, 2016, we had four significant customers that each contributed between 5% to 35% of our revenues. During the year ended December 31, 2015, we had three significant customers that each contributed between 6% to 40% of our revenues. In 2014, we had four significant customers that each contributed between 7% to 38% of our revenues.

The percentage of our revenues from customers located outside the United States was 51%, 56% and 55% in the years ended December 31, 2016, 2015and 2014, respectively. The following table sets forth the geographical distribution, by percentage, of our net revenues for the periods indicated:

	Year ended December 31,		
	2016	2015	2014
United States	49 %	44 %	45 %
Japan	36 %	41 %	40 %
Asia, excluding Japan	12 %	11 %	11 %
Europe	3 %	4 %	4 %
Total	100 %	100 %	100 %

We price our products on a per wafer basis, taking into account the unique value of our technology and its ability to enable customers to differentiate their products, complexity of the technology, prevailing market conditions, volume forecasts, the strength and history of our relationships with the customer and our current capacity utilization. Most of our customers usually place purchase orders between two to six months before shipment.

To promote our products, technology offering, and services we publish press releases, articles, technology journals, and white papers. In addition, we present and participate in panel sessions at industry conferences, hold a variety of regional and international technology seminars, and exhibit at various industry trade shows. We discuss advances in our process technology portfolio and progress on specific relevant programs with our prospective and existing customers, as well as industry analysts and research analysts, on a regular basis. We publicly release any such information that we deem material or important to disclose and as required by law.

Our customers use our processes to design and market a broad range of analog and mixed-signal semiconductors for diverse end markets, including wired and wireless high-speed communications, consumer electronics, automotive and industrial applications. We manufacture products for a wide range of electronic systems, including but not limited to, high-performance applications, such as antenna switches, transceivers and power management circuits for cellular phones; transceivers and power amplifiers for wireless local area networking products; power management, audio amplifiers and driver integrated circuits for consumer electronics; tuners for digital televisions and set-top boxes; modem chipsets for broadband access devices and gaming devices; serializer/deserializers, or SerDes, for fiber optic transceivers; high end video cameras, dental and medical x-ray vision, industrial cameras, focal plane arrays for imaging applications; infra-red detectors for gesture recognition, controllers for power amplifier and switching chips in cellular phones and wireline interfaces for switches and routers.

Competition

The global semiconductor foundry industry is highly competitive. We compete most directly in the specialty segment with foundries such as Vanguard Semiconductor, DongBu, X-Fab, and HH Semi. We also compete with the pure-play advanced technology node-driven foundry service providers such as Taiwan Semiconductor Manufacturing Corporation (“TSMC”), United Microelectronics Corporation (“UMC”), Global Foundries Inc. and Semiconductor Manufacturing International Corp. (“SMIC”). These four foundries primarily compete against one another and focus on 12 inch deep-submicron CMOS processing, though they each also have some capacity for specialty process technologies. The rest of the foundry industry generally targets either industry standard 8 inch CMOS processing or specialty process technologies. It includes existing Chinese, Korean and Malaysian foundries. We also compete with integrated device manufacturers that have internal semiconductor manufacturing capacity or foundry operations, such as ST, Intel, Samsung, and others that produce ICs for their own use and may allocate a portion of their manufacturing capacity to external foundry customers. Most of the foundries with which we compete are located in Asia-Pacific and benefit from their close proximity to companies involved in the design of ICs and to the Asian customer base.

The principal elements of competition in the wafer foundry market are:

·technology offering and future roadmap;

·product performance;

·system level technical expertise;

·research and development capabilities;

·access to intellectual property;

·customer technical support;

·design services;

·product development kits (PDKs);

·manufacturing operational performance;

·quality systems;

·product quality;

·manufacturing yields;

·customer support and service;

·pricing;

·management expertise;

·strategic customer relationships;

·capacity availability; and

·stability and reliability of supply.

Some of our competitors, notably the pure-play advanced technology node-driven foundry service providers, have greater manufacturing capacity, superior research and development capability, better cost structure and greater financial, marketing and other resources. As a result, these companies may be able to compete more aggressively over a longer period of time than us.

We seek to compete primarily on the basis of advanced specialty analog/mixed-signal technology, R&D, breadth of process offering, production quality, technical support, and our design, engineering and manufacturing services. We have a highly differentiated specialty offering and proven track record in analog/mixed-signal markets, which enables us to effectively compete with larger foundry service providers.

Some semiconductor companies have advanced their CMOS designs to 22 nanometer or smaller geometries. These smaller geometries may provide customers with performance and integration features that may be comparable to, or exceed, features offered by our specialty process technologies, and may be more cost-effective at higher production volumes for certain applications, such as when a large amount of digital content is required in a mixed-signal semiconductor and less analog content is required. Our specialty process technologies will therefore compete with these advanced CMOS processes for customers and some of our potential and existing customers could elect to design these advanced CMOS processes into their next generation products. We are not currently capable, and do not currently plan to become capable, of providing CMOS processes at these smaller geometries.

WAFER FABRICATION SERVICES

Wafer fabrication is an intricate process that consists of constructing layers of conducting and insulating materials on raw wafers in intricate patterns that give the IC its function. IC manufacturing requires hundreds of interrelated steps performed on different types of equipment, and each step must be completed with extreme accuracy for finished ICs

to work properly. The process can be summarized as follows:

Circuit Design. IC production begins when a fabless IC company or IDM designs (or engages a third party or us) the layout of a device's components and designates the interconnections between each component. The result is a pattern of components and connections that defines the function of the IC. In highly complex circuits, there may be more than 43 layers of electronic patterns. After the IC design is completed, we provide these companies with IC manufacturing services.

Mask Making. The design for each layer of a semiconductor wafer is imprinted on a photographic negative, called a reticle or mask. The mask is the blueprint for each specific layer of the semiconductor wafer. We engage external mask shops for the manufacturing and provision of such masks.

IC Manufacturing. Transistors and other circuit elements comprising an IC are formed by repeating a series of processes in which photosensitive material is deposited on the wafer and exposed to light through a mask. Advanced IC manufacturing processes consist of hundreds of steps, including photolithography, oxidation, etching and stripping of different layers and materials, ion implantation, deposition of thin film layers, chemical mechanical polishing and thermal processing. The final step in the IC manufacturing process is wafer probing, which involves electronically inspecting each individual IC in order to identify those that are operable for assembly. Our customers often use third party service providers for the performance of such services although we occasionally provide this service to certain customers.

Assembly and Test. After IC manufacture, the wafers are transferred to assembly and test facilities. In the assembly process, each wafer is cut into dies, or individual semiconductors, and tested. Defective dies are discarded, while good dies are packaged and assembled. Assembly protects the IC, facilitates its integration into electronic systems and enables heat dissipation. Following assembly, the functionality, voltage, current and timing of each IC is tested. After testing, the completed IC is shipped either to our customer or to their customer's printed circuit board manufacturing facility. Our customers often use third party service providers for the performance of wafer assembly and testing, and to a smaller extent part of such process is performed independently by us.

PROCUREMENT AND SOURCING

Our manufacturing processes use many materials, including silicon wafers, chemicals, gases, photomasks and various metals. These raw materials generally are available from several suppliers. In many instances, we purchase raw materials from a single source to obtain preferred pricing. In those cases, we generally also seek to identify, and in some cases qualify, alternative sources of supply.

In addition, we have agreements with several key material suppliers under which they hold certain levels of inventory for our use. We are not obliged under these agreements to purchase and pay for the raw material inventory that is held by our vendors at our sites until we actually use it, unless we hold the inventory beyond specified time limits.

RESEARCH AND DEVELOPMENT

Our future success depends, to a large degree, on our ability to continue to successfully develop and introduce to production advanced process technologies that meet our customers' needs. Our process development strategy relies on CMOS process platforms that we license and transfer from third parties or develop ourselves.

From time to time, at a customer's request, we develop a specialty process module, which in accordance with the applicable agreement may be used for such customer on an exclusive basis or added to our process offering. Such developments are very common in all of our special process technologies noted above.

Our research and development activities have related primarily to our process, device and design development efforts in all specialty areas that were mentioned above, and have been sponsored and funded by us and in certain cases with some participation of the OCS. Accordingly, Tower is subject to restrictions set forth in Israeli law, as amended, which may limit the ability of a company to transfer technologies outside of Israel, if such technologies were developed with the funding of the OCS, or its replacement authority the IIA (Israeli Innovation Authority). In addition, we may be required to obtain export licenses before exporting certain technology or products to any third party and may be required to comply with Israeli, U.S. and other foreign export regulations as may be applicable.

Our research and development activities seek to upgrade and improve our manufacturing technologies and processes. We maintain a central research and development team primarily responsible for developing cost-effective technologies that can serve the manufacturing needs of our customers. A substantial portion of our research and development activities are undertaken in cooperation with our customers and equipment vendors. Due to the rapid changes in technology that characterize the semiconductor industry, effective research and development is essential to our success. We plan to continue to invest significantly in research and development activities in order to develop advanced process technologies for new applications.

Research and development expenses for the years ended December 31, 2016, 2015 and 2014 were $63.1 million, $61.7 million and $51.8 million, respectively, net of government participation of $0.5 million, $0.6 million and $0.6 million, respectively. As of December 31, 2016, we employed 387 professionals in our research and development departments, 45 of whom have PhDs. In addition to our research and development departments located at our facilities in Migdal Haemek, Israel, Newport Beach, California, San Antonio, Texas and Hokuriku Japan, we maintain a design center in Netanya, Israel.

PROPRIETARY RIGHTS

Intellectual Property and Licensing Agreements

Our success depends in part on our ability to obtain patents, licenses and other intellectual property rights covering our production processes. To that end, we have obtained certain patents, acquired patent licenses and intend to continue to seek patents on our intellectual property.

As of December 31, 2016, we held 248 patents in force. We have entered into various patent and other technology license agreements with technology companies, including Synopsys, ARM, Cadence, Mentor Graphics and others, under which we have obtained rights to additional technologies and intellectual property.

We constantly seek to strengthen our technological expertise through relationships with technology companies. We seek to expand our core strengths in CMOS image sensors, embedded flash, power management, RF, SiGe, MEMS and mixed-signal technologies by continuous development in these areas. A main component of our process development strategy is to acquire licenses for standard CMOS technologies and cell libraries from leading providers, such as ARM and Synopsys, and further develop specialized processes through our internal design teams. The licensing of these technologies has significantly reduced our internal development costs.

In connection with the separation of Jazz Semiconductor’s business from Conexant in 2002, Conexant contributed to Jazz Semiconductor a substantial portion of its intellectual property, including software licenses, patents and intellectual property rights in know-how related to its business. Jazz agreed to license intellectual property rights relating to the intellectual property contributed to Jazz by Conexant back to Conexant and its affiliates. Conexant may use this license to have Conexant products produced by third-party manufacturers and sell such products, subject to obtaining Jazz’s prior consent.

Panasonic granted a license to certain process technologies to TPSCo for the manufacture of products for Panasonic and third party foundry customers. TPSCo may, in certain circumstances, sub-license such technology to Tower or to other third parties for payment of royalties. The term of the agreement is five years until March 2019, and he parties have already commenced discussions with regard to the terms of renewing the agreement. In connection with the acquisition of Fab 9, Maxim granted TJT a license to certain process technologies for the manufacture of products at Fab 9 by TJT, some of which can only be used for the manufacture of products for Maxim, as well as license to certain process software for the manufacture of products at Fab 9.

Our ability to compete depends on our ability to operate without infringing upon the proprietary rights of others. The semiconductor industry is generally characterized by frequent litigation over patent and other intellectual property rights. As is the case with many companies in the semiconductor industry, we have from time to time received communications from third parties asserting that their patents cover certain of our technologies or alleging infringement of intellectual property rights. We expect that we will receive similar communications in the future. Irrespective of the validity or the successful assertion of such claims, we could incur significant costs and devote significant management resources in defending these claims.

DESIGN SERVICES

To better serve our customers' design needs using advanced CMOS and mixed-signal processes, we have entered into a series of agreements with leading providers of physical design libraries, mixed-signal and non volatile memory design components. These components are basic design building blocks, such as standard cells, interface input-output (I/O) cells, software compilers for the generation of on-chip embedded memories arrays, mixed-signal and non-volatile memory design blocks. To achieve optimal performance, all of these components must be customized to work with our manufacturing process. These components are used in most of our customers' chip designs.

We interact closely with customers throughout the design development and prototyping process to assist them in the development of high performance and low power consumption semiconductor designs and to lower their final die, or individual semiconductor, costs through die size reductions and integration. We provide engineering support and services as well as manufacturing support in an effort to accelerate our customers' design and qualification process so that our customers can achieve faster time to market. We have entered into alliances with Cadence Design Systems, Inc., Synopsys, Inc., Mentor Graphics Corp., and other suppliers of electronic design automation tools, and also licensed standard cells, I\O and memory technologies from ARM, Synopsys, Inc., and other leading providers of physical intellectual property components for the design and manufacture of ICs. Through these relationships, we provide our customers with the ability to simulate the behavior of their design in our processes using standard electronic design automation, or EDA tools.

The applications for which our specialty process technologies are targeted present challenges that require an in-depth set of simulation models. We provide these models as an integral part of our design support. At the initial design stage, our customers' internal design teams use the proprietary design kits that we have developed to design semiconductors that can be successfully and cost-effectively manufactured using our specialty process technologies. These design kits, which collectively comprise our design library and design platform, allow our customers to quickly simulate the performance of a semiconductor design with our processes, enabling them to refine their product design to ensure alignment to our manufacturing process before actually manufacturing the semiconductor. Our engineers, who have significant experience with analog and mixed-signal semiconductor design and production, work closely with our customers' design teams to provide design advice and help them optimize their designs for our processes and their performance requirements. After the initial design phase, we provide our customers with a multi-project wafer service to facilitate the early and rapid use of our specialty process technologies, which allows them to gain early access to actual samples of their designs. Under this multi-project wafer service, we schedule a bimonthly multi-project wafer run in which we manufacture several customers' designs in a single mask set, providing our customers with an opportunity to reduce the cost and time required to test their designs. Our design center helps customers accelerate the design-to-silicon process and enhances first-time silicon success by providing them with the

required design resources and capabilities. Our design support can assist in all or part of the design flow. Our in-depth knowledge of the fab and processes provide a substantive advantage when implementing designs that reach the boundaries of technology. In addition, our IP and design services can assist and relieve some of our customers' issues, providing the specific skills and expertise critical for successful implementation of our customers' design on our manufacturing process.

We believe that our circuit design expertise and our ability to accelerate our customers' design cycle while reducing their design costs represent one of our competitive strengths.

SPECIAL SECURITY AGREEMENT WITH DSS

In connection with Jazz's aerospace and defense business, its facility security clearance and trusted foundry status, Tower and Jazz have worked with the Defense Security Service of the United States Department of Defense ("DSS") to mitigate concern of foreign ownership, control or influence over the operations of Jazz specifically relating to protection of classified information and prevention of potential unauthorized access thereto by creating Jazz Semiconductor Trusted foundry ("JSTF") as a subsidiary of Jazz and limiting possession of all classified information solely to JSTF. Tower and Jazz have further agreed to operate JSTF under a special security agreement signed with DSS. JSTF has been certified by the Defense Microelectronics Activity ("DMEA") for participation in the Department of Defense's accredited supplier program and has obtained a facility security clearance from DSS and accreditation by DMEA as a Category 1A and 1B accredited supplier.

C. ORGANIZATIONAL STRUCTURE

The legal name of our company is Tower Semiconductor Ltd. Tower was incorporated under the laws of the State of Israel in 1993. Tower directly operates our Fab 1 and Fab 2 facilities in Israel. Tower's wholly-owned subsidiary, Tower US Holdings Inc. owns all of the shares of Jazz US Holdings Inc., which owns all of the shares of Jazz Semiconductor, Inc. (all three companies are incorporated under the laws of the State of Delaware), which operates our Fab 3 facility. Tower's wholly-owned subsidiary, TowerJazz Japan, Ltd. (incorporated in Japan) operated our Fab 4 facility in Japan, which, in the course of restructuring our activities and business in Japan, ceased its operations in July 2014 and completed its dissolution in 2016. Tower holds a 51% equity stake in TPSCo (and PSCS holds the remaining equity of TPSCo). TPSCo is incorporated under the laws of Japan and operates three fabs Arai E, Uozo E and Tonami CD located in Japan. As of February 2016, TowerJazz Texas, Inc. (the shares of which are fully owned by Tower US Holdings), operates our Fab 9 facility in San Antonio, Texas, USA.

D. PROPERTY, PLANTS AND EQUIPMENT

Manufacturing Facilities

We manufacture semiconductor wafers at seven manufacturing facilities: Fab 1 and Fab 2 facilities in Israel, Fab 3 Jazz's facility in Newport Beach, California in the U.S., TPSCo's three fabs (Arai E, Uozo E and Tonami CD) in Japan, and Fab 9 TJT's facility in San Antonio, Texas, U.S. The capacity in each of our facilities at any particular time varies and depends on the combination of the processes being used and the product mix being manufactured at such time. Hence, it may be significantly lower at certain times as a result of certain combinations that may require more processing steps than others. We have the ability to rapidly change the mix of production processes in use in order to respond to changing customer needs and to maximize utilization of the fab. In general, our ability to increase our manufacturing capacity has been achieved through the addition of equipment, improvement in equipment utilization, the reconfiguration and expansion of existing clean rooms area.

Capital expenditures in 2016 and 2015 were approximately $210 million and $165 million, respectively, net of proceeds from sale of equipment and fixed assets of approximately $8 million and $7 million, respectively.

Fab 1

We acquired our Fab 1 facility from National Semiconductor in 1993, which had operated the facility since 1986. The facility is located in Migdal Haemek, Israel. We occupy the facility under a long-term lease from the Israel Lands Authority which expires in 2032.

Due to the sensitivity and complexity of the semiconductor manufacturing process, a semiconductor manufacturing facility requires a special “clean room” in which most of the manufacturing functions are performed. Our Fab 1 facility includes an approximately 51,900 square foot clean room.

Since we commenced manufacturing at Fab 1, we increased its manufacturing capacity and expanded the technologies qualified in the fab, including specialized processes. Fab 1 supports geometries ranging from 1.0 micron to 0.35-micron.

Fab 2

In 2003, we commenced production in our Fab 2, also located in Migdal Haemek, Israel. Fab 2 supports geometries ranging from 0.35 to 0.11-micron, using advanced CMOS technology, including CMOS image sensors, embedded flash, advanced analog, RF SOI, power platforms and mixed-signal technologies. We have invested significantly in the purchase of fixed assets, primarily in connection with the construction of Fab 2, technology advancement and capacity expansion.

The land on which Fab 2 is located is subject to a long-term lease from the Israel Lands Authority that expires in 2049. The overall clean room area in Fab 2 is approximately 100,000 square feet.

Fab 3

Jazz’s manufacturing facilities and headquarters, which we refer to as Fab 3, are located in Newport Beach, California. Fab 3 supports geometries ranging from 0.80 to 0.13-micron. The manufacturing facility comprises 320,000 square feet, including 120,000 square feet of overall clean room area.

Jazz leases its fabrication facilities and offices under lease contracts that Jazz can extend until 2027. In 2015, Jazz exercised its option to extend the lease term from 2017 to 2022, while maintaining the option to extend the lease term at its sole discretion from 2022 to 2027. Under Jazz amended leases, Jazz’s rental payments consist of fixed base rent and fixed management fees and Jazz’s pro rata share of certain expenses incurred by the landlord in the ownership of these buildings, including property taxes, building insurance and common area maintenance. Jazz and the landlord further amended the lease, setting forth certain obligations of Jazz and the landlord, including certain noise abatement actions at the fabrication facility.

Uozu E, Tonami CD and Arai E fabs

In March 2014, we acquired a 51% equity stake in TPSCo, a company formed by Panasonic Corporation, to manufacture products for Panasonic and other third party customers, using Panasonic's three semiconductor manufacturing facilities located in Hokuriku, Japan. Pursuant to the transaction, Panasonic transferred its semiconductor wafer manufacturing process and capacity tools (8 inch and 12 inch) at its three fabs located in Hokuriku (Uozu E, Tonami CD and Arai E) to TPSCo. The fabs support geometrics ranging down to 45 nanometer.

Fab 9

In February 2016, we acquired a fabrication facility in San Antonio Texas, USA from Maxim, which we refer to as Fab 9. The assets and related business that we acquired from Maxim are held and conducted through a wholly owned US subsidiary, TJT. Fab 9 supports process geometries ranging from 0.18 to 0.8 micron for the manufacture of products using CMOS and analog based technologies. Under the terms of this agreement, until the termination or expiration of the supply agreement signed between Maxim and TJT, Maxim has a right of first offer to re-purchase Fab 9 in the event Tower or any of its subsidiaries sell, transfer, dispose of, cease the operations of, close, transfer or relocate Fab 9, or if Tower or its operations at Fab 9 become subject to a petition of bankruptcy or liquidation.

ENVIRONMENTAL, SAFETY AND QUALITY MATTERS AND CERTIFICATIONS

We have placed significant emphasis on achieving and maintaining a high standard of manufacturing quality. All our facilities are ISO 9001 certified, an international quality standard that provides guidance to achieve an effective quality management system. In addition, all our facilities are TS16949 certified, a more stringent automotive quality standard.

For environmental, our operations are subject to a variety of laws and governmental regulations relating to the use, discharge and disposal of toxic or otherwise hazardous materials used in our production processes. Failure to comply with these laws and regulations could subject us to material costs and liabilities, including costs to clean up contamination caused by our operations. All of our facilities are ISO 14001 certified, an international standard that provides management guidance on how to achieve an effective environmental management system. Risks have been evaluated and mitigation plans are in place to prevent and control accidental spills and discharges. Procedures have also been established at all our locations to ensure all accidental spills and discharges are properly addressed. The environmental management system assists in evaluating compliance status with all applicable environmental laws and regulations as well as establishing loss prevention and control measures. In addition, our facilities are subject to strict regulations and periodic monitoring by government agencies. With these systems, we believe we are currently in compliance in all material respects with applicable environmental laws and regulations.

For safety, all of our facilities are OHSAS 18001 certified, an international occupational health and safety standard that provides guidance on how to achieve an effective health and safety management system. The health and safety standard management system assists in evaluating compliance status with all applicable health and safety laws and regulations as well as establishing preventative and control measures. We believe we are currently in compliance with all applicable health and safety laws and regulations.

Our goal in implementing OHSAS 18001, ISO 14001, ISO 9001 and TS16949 systems is to continually improve our environmental, health, safety and quality management systems.

ITEM 4A. UNRESOLVED STAFF COMMENTS

Not Applicable.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

A. OPERATING RESULTS

Management's Discussion and Analysis of Financial Condition and Results of Operations

The information contained in this section should be read in conjunction with our audited consolidated financial statements for the years ended December 31, 2016 and 2015 and related notes and the information contained elsewhere in this annual report. Our financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("US GAAP").

Critical Accounting Policies

Revenue Recognition.

Our revenues are generated principally from sales of semiconductor wafers and in addition we derive revenues from design support and other technical and support services, which are incidental to the sale of semiconductor wafers. The vast majority of our revenues is achieved through the efforts of our direct sales force.

In accordance with ASC Topic 605, "Revenue Recognition", we recognize revenues from sale of products when the following fundamental criteria are met: (i) persuasive evidence of an arrangement exists, (ii) delivery has occurred or services have been rendered, (iii) the price to the customer is fixed or determinable; and (iv) collection of the resulting receivable is reasonably assured. Generally, delivery occurs after products meet all of the customer's acceptance criteria based on pre-shipment electronic, functional and quality tests.

We provide for sales returns allowance relating to specified yield or quality commitments as a reduction of revenues based on past experience and specific identification of events necessitating an allowance.

Our revenue recognition policy is significant because our revenues are a key component of our results of operations. We follow very specific and detailed guidelines in measuring revenues. Any changes in assumptions for determining the allowance for returns and other factors affecting revenue recognition may affect mainly the timing of our revenue recognition, which may affect our financial position and results of operations.

Depreciation and Amortization of Fixed Assets and Intangible Assets.

We are heavily capital oriented and the amount of depreciation is a significant amount of our yearly expenses. Changes to the useful lives assumption and hence the depreciation have a material impact on our results of operations. Fixed and intangible assets depreciation and amortization expenses in 2016 amounted to $180 million. Following changes that we implemented during 2015 in the estimated useful life of our machinery, equipment and facility infrastructure which are detailed below, we estimate that the expected economic life of our assets is as follows: (i) buildings (including facility infrastructure) –10 to 25 years; (ii) machinery and equipment, software and hardware – 3 to 15 years; and (iii) technology and other intangible assets – 4 to 19 years. The amounts attributed to intangible assets as part of the purchase price allocations for the acquisitions of our subsidiaries are amortized over the expected estimated economic lives of the intangible assets commonly used in the industry. Changes in our estimates regarding the expected economic life of our assets will affect our depreciation and amortization expenses.

44

In connection with the periodic review of the estimated remaining useful lives of property and equipment at our foundry manufacturing facilities, it was determined in the second quarter of 2015, that the estimated useful lives of machinery and equipment should be extended to 15 years from 7 years and the useful lives of facility infrastructure should be extended to 25 years from 14 years. We extended the estimated useful lives of these assets as a result of the extended use of mature technologies, longer processes and product life cycles, the versatility of manufacturing equipment, facility systems and infrastructure to provide better flexibility to meet changes in customer demand and the ability to re-use equipment over several technology cycles significantly extending the estimated usage period of such assets. For the year ended December 31, 2015, the impact of these extended estimated useful lives was approximately $42 million of reduced depreciation expenses which resulted in a net decrease of approximately $27 million of the loss for the year and a decrease in basic loss per share by $0.37. We believe that the current estimates of useful lives are reasonable, sustainable and better reflect the future anticipated usage of these assets.

Income Taxes.

We account for income taxes using an asset and liability approach as prescribed in ASC Topic 740, “Income Taxes”. This topic prescribes the use of the liability method whereby deferred tax asset and liability account balances are determined based on differences between financial reporting and tax bases of assets and liabilities. Deferred taxes are computed based on the tax rates anticipated (under applicable law as of the balance sheet date) to be in effect when the deferred taxes are expected to be paid or realized.

We evaluate how to realizeour deferred tax assets for each jurisdiction in which we operate at each reporting date, and establish valuation allowances when it is more likely than not that all or a part of our deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income of the same character and in the same jurisdiction. We consider all available positive and negative evidence in making this assessment, including, but not limited to, the scheduled reversal of deferred tax liabilities and projected future taxable income. In circumstances where there is sufficient negative evidence indicating that our deferred tax assets are not more-likely-than-not realizable, we establish a valuation allowance.

ASC 740-10 prescribes a two-step approach for recognizing and measuring uncertain tax positions. The first step is to evaluate tax positions taken or expected to be taken in a tax return by assessing whether they are more-likely-than-not sustainable, based solely on their technical merits, upon examination and including resolution of any related appeals or litigation process. The second step is to measure the associated tax benefit of each position as the largest amount that we believe is more-likely-than-not realizable. Differences between the amount of tax benefits taken or expected to be taken in our income tax returns and the amount of tax benefits recognized in our financial statements represent our unrecognized income tax benefits. Our policy is to include interest and penalties related to unrecognized income tax benefits as a component of income tax expense.

Recently Issued Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") amended the existing accounting standards for revenue recognition in Accounting Standards Update (“ASU”) 2014-09, “Revenue from Contracts with Customers”, which amendment has been further amended several times, most recently in 2016. The amendment is based on the principle that revenue should be recognized to depict the value of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services if sold at the end of the calendar quarter. ASU 2014-09 is effective January 1, 2018. Early adoption is permitted, but not before January 1, 2017. The amendment may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of initial application. The Company is considering whether control over wafers in production, is transferred over time or at a certain point in time. The Company’s manufacturing of wafers creates an asset with no alternative use. In the event a customer cancels an order, the Company is entitled to recover its costs plus reasonable margin, in accordance with the engagement terms which generally apply to most of its customers. Should it be determined that control over the goods is transferred over time, the Company may recognize

revenue for such engagements based on the proportion of the manufacturing of the wafer that was completed. Such determination would result in earlier recognition of revenues over the time of production rather than upon delivery of a finished wafer.

In November 2015, the FASB issued ASU 2015-17, “Balance Sheet Classification of Deferred Taxes”. ASU 2015-17 simplifies the presentation of deferred income taxes and requires that deferred tax assets and liabilities, as well as any related valuation allowance, be classified as noncurrent in a classified statement of financial position. The update will apply to the Company as of the first quarter of 2017. The update is not expected to have a material effect on the Company's consolidated financial statements.

In April 2015, the FASB issued 2015-03, “Interest Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs”. This guidance changes the presentation of debt issuance costs in financial statements. Under this ASU, an entity is required to present such costs in the balance sheet as a direct deduction from the related debt liability rather than as an asset. Amortization of the costs is reported as a financing expense. The requirement to present debt issuance costs as a direct reduction of the related debt liability (rather than as an asset) is consistent with the presentation of debt discounts under US GAAP. In addition, it aligns the guidance in US GAAP with that in IFRS, under which transaction costs that are directly attributable to the issuance of a financial liability are treated as an adjustment to the initial carrying amount of the liability. As a result of the retrospective adoption of ASU 2015-03 effective January 1, 2016, deferred financing costs of approximately $0.9 million, previously classified within long-term assets were applied to reduce the related debt liabilities as of December 31, 2015. In 2016, issuance expenses relating to Series G Debentures and to the bank loan to TJT were deducted accordingly from the debt liability carrying amounts.

In January 2016, the FASB issued ASU 2016-01 to address certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. The standard requires entities to measure equity investments that do not result in consolidation and are not accounted for under the equity method at fair value and recognize any changes in fair value in net income. The provisions under this amendment are effective January 1, 2019, and for interim periods within that year. Early adoption is not permitted. The company is evaluating the impact of adopting this guidance on it’s consolidated financial statements and disclosures and expects it would not have a material effect on its financial results.