

**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, 2019 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 2310502, 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:**

<b>Title of Each Class</b>	<b>Trading Symbol(s)</b>	<b>Name of Each Exchange on Which Registered</b>
Ordinary Shares, par value New Israeli Shekels 15.00 per share	TSEM	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: 106,808,072 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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (section 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes  No

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

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

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

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

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

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

Item 17  Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes  No

## 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”.

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## EXPLANATORY INFORMATION

In this annual report, “Tower” refers to Tower Semiconductor Ltd., an Israeli company, and “we,” “us,” “our,” and “the Company” and words of similar import, refer collectively to Tower and its then owned and/or consolidated subsidiaries.

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. “U.S. GAAP” means the generally accepted accounting principles of the United States. Unless otherwise stated, all of our financial information presented in this annual report has been prepared in accordance with U.S. GAAP.

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. 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. In March 2020, the company name of Jazz Semiconductor, Inc. was changed to Tower Semiconductor Newport Beach, Inc. (“NPB Co.”) and the name of Jazz US Holdings Inc. was changed to Tower Semiconductor NPB Holdings, Inc. As used in this annual report, “Tower NPB” refers to Jazz Technologies, including its subsidiaries, for the period preceding November 23, 2015, and to Jazz US Holdings or Tower Semiconductor NPB Holdings, Inc., under its new name, including its subsidiaries, following such date.

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”), holding three manufacturing facilities in Japan. In June 2014, Panasonic transferred its shares and assigned its rights and obligations in TPSCo to its wholly owned subsidiary, Panasonic Semiconductor Solutions Co. (“PSCS”). In November 2019, Panasonic announced the sale of its shares in PSCS to Nuvoton Technology Corp. (a Taiwan based semiconductor company, majority owned by Winbond Electronics Corporation), in a transaction that is planned to close in June 2020.

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. In March 2020, the company name of TowerJazz Texas Inc. was changed to Tower Semiconductor San Antonio, Inc. (“Tower SA”).

The consolidated financial statements included in this annual report include the results and balances of Tower and its following subsidiaries: (i) its wholly-owned indirect subsidiary Tower NPB, (ii) its majority-owned subsidiary TPSCo and (iii) its indirect wholly-owned subsidiary Tower SA.

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 NPB Co. operates in Newport Beach, California. “Arai E” means the semiconductor fabrication facility TPSCo operates in Kurihara 4-5-1, Myoko-shi, Niigata, Japan. “UozuE” 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 Tower SA operates in San Antonio, Texas.

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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, 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 45 nanometers to 1 micron for the manufacture of products using CMOS and analog based technologies.

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TPSCO® and TPSCo ® (and design) are registered trademarks of TPSCo in the U.S. and Japan.

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**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 US GAAP and are presented in US dollars. The selected historical audited consolidated financial information as of December 31, 2019 and 2018 and for each of the three years ended December 31, 2019, 2018 and 2017 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, 2017, 2016 and 2015 and for each of the years ended December 31, 2016 and 2015 has been derived from our audited consolidated financial statements for those years that are not included in this annual report.

Our audited consolidated financial statements include Tower SA's results commencing February 1, 2016. Our audited consolidated balance sheets include Tower SA's balances since December 31, 2016.

Due to the acquisition of Tower SA in February 2016, it may be difficult to perform year-over-year comparisons of our 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.

	<b>Year Ended December 31,</b>				
	<b>2019</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>
<b>(Dollars in thousands, except per share data)</b>					
<b>Consolidated Statement of Operations Data:</b>					
Revenues	\$ 1,234,003	\$ 1,304,034	\$ 1,387,310	\$ 1,249,634	\$ 960,561
Cost of revenues	1,004,332	1,011,087	1,033,005	946,534	755,196
Gross profit	229,671	292,947	354,305	303,100	205,365
Research and development	75,579	73,053	67,664	63,134	61,669
Marketing, general and administrative	67,376	64,951	66,799	65,439	62,793
Nishiwaki Fab restructuring and impairment cost (income), net	--	--	--	(627)	(991)
Operating profit (loss)	86,716	154,943	219,842	175,154	81,894
Financing income (expense), net	12	(13,184)	(15,447)	(24,349)	(123,109)
Gain from acquisition, net	--	--	--	50,471	--
Other income (expense), net	4,293	(2,442)	(2,627)	9,322	(190)
Profit (loss) before income tax	91,021	139,317	201,768	210,598	(41,405)
Income tax benefit (expense)	(2,948)	(5,938)	99,888	(1,432)	12,278
Net Profit (loss)	88,073	133,379	301,656	209,166	(29,127)
Net loss (income) attributable to non-controlling interest	1,975	2,200	(3,645)	(5,242)	(520)
Net Profit (loss) attributable to the Company	\$ 90,048	\$ 135,579	\$ 298,011	\$ 203,924	\$ (29,647)
Basic earnings (loss) per ordinary share	\$ 0.85	\$ 1.35	\$ 3.08	\$ 2.33	\$ (0.40)
Diluted earnings per ordinary share	\$ 0.84	\$ 1.32	\$ 2.90	\$ 2.09	
<b>Other Financial Data:</b>					
Depreciation and amortization, including amortization of financing expenses and accretion	\$ 214,474	\$ 214,391	\$ 208,411	\$ 197,756	\$ 256,005
<b>Selected Balance Sheet Data:</b>					
Cash, cash equivalents and short-term interest-bearing deposits	\$ 571,170	\$ 505,170	\$ 445,961	\$ 389,377	\$ 205,575
Working capital	\$ 835,425	\$ 784,238	\$ 571,959	\$ 450,883	\$ 235,608
Total assets	\$ 1,932,833	\$ 1,789,977	\$ 1,673,639	\$ 1,379,884	\$ 965,368
Short-term bank debt and current maturities of loans, leases and debentures	\$ 65,932	\$ 10,814	\$ 105,958	\$ 48,084	\$ 33,259
Loan from banks, net of current maturities	\$ 101,365	\$ 100,118	\$ 87,533	\$ 133,163	\$ 210,538
Debentures, net of current maturities	\$ 94,552	\$ 120,170	\$ 128,368	\$ 162,981	\$ 45,481
Capital leases, net of current maturities	\$ 39,207	\$ 36,381	\$ 12,822	\$ --	\$ --
Shareholders' equity	\$ 1,346,723	\$ 1,236,205	\$ 1,029,706	\$ 682,614	\$ 385,586
Number of shares outstanding as of December 31 of any year	106,808	104,979	98,458	92,985	82,058



## **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**

*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, 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 income, loss of reputation and/or a loss of customers, any of which may adversely impact our business, revenues, financial results and financial condition.

***Demand for our foundry services is dependent on the demand in our customers' end markets, which are typically cyclical and volatile. 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 significantly affect our business, financial results and financial position.***

Our customers generally use the semiconductors produced in our fabrication facilities ("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 in the past by downturns in demand for high technology products, market conditions can change rapidly, without 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 ("ICs"), 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.

***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 and our competitors may have competitive advantages over us; 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 integrated device manufacturers, or 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 complementary metal oxide semiconductor (“CMOS”) designs to smaller than 14 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.

***Our financial results may fluctuate from quarter to quarter, making it difficult to predict our future performance, which may negatively affect our financial position and financial results.***

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, some 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;
- Our ability to conclude and materialize business development and acquisition transactions for capacity expansion;
- Inventory and supply chain management of our customers;
- The loss of a key customer, not attracting new designs from key customers, 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, the financial condition of certain of our customers and the regulatory or other payment difficulties that may be imposed in a region in which customers reside;
- The occurrence of an unexpected event, such as environmental events, a global disease, industrial accidents such as fire or explosions, electricity outage, 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 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; and
- Changes in accounting rules affecting our results.

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

***We may be required to obtain financing for strategic opportunities, which financing may not be available for us in a timely manner or on favorable terms, and which may dilute the holdings of our shareholders and/or require us to incur additional debt.***

In order to invest in strategic opportunities in support of our acquisition and capacity growth plans and/or business development activities, we may be required to obtain funds from financing sources, including through debt vehicles and/or re-financing, sale of new securities or other financing alternatives. There is no assurance that we will be able to obtain sufficient funding, if at all, from these financing sources or other sources in a timely manner (or on commercially reasonable terms) in order to allow us to fund our growth plans and/or business development activities, which may adversely affect our financial position and operations, may dilute the holdings of our shareholders and/or require us to incur additional debt.

***If we do not maintain our current key customers, and/or do not attract new key 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. In 2019, 27% of our revenues were generated from one customer (PSCS), as detailed below, and five additional customers each generated between 5% to 9% of our revenues. The loss or reduction in volume or sales price to any one of these customers, whether due to business negotiation, their insolvency or their unwillingness or inability to perform their obligations under their respective relationships with us, or our inability to renew our engagements with them on commercially reasonable terms, produce their new products, fulfill their demand, or, alternatively, attract new customers to replace such lost business, may materially negatively impact our overall business, revenues and profitability.

PSCS (Panasonic Semiconductor Solutions), a wholly-owned subsidiary of Panasonic Corporation, is the largest customer of TPSCo and Tower on a consolidated basis. TPSCo engaged PSCS under a manufacturing agreement in March 2014 for a five-year period, which was renewed in March 2019 for an additional three years. Due to the reduced selling price per product and services under the renewed March 2019 agreement, revenue from PSCS decreased by approximately \$70 million in the nine-month period ended December 31, 2019. We are making efforts to compensate for such reduction with additional manufacturing volume demand from other customers into TPSCo fabs; however, if we are unsuccessful in such efforts, our consolidated revenue, financial position and results may be adversely effected.

In November 2019, Panasonic announced the sale of its shares in PSCS to Nuvoton Technology Corp. (a Taiwan based semiconductor company, majority owned by Winbond Electronics Corporation), in a transaction that is planned to close in June 2020. We cannot assure you that such transaction will not have an impact on our financial results, cash position and profitability.

***Risks relating to construction activities adjacent to Fab 3 and our Fab 3 lease could harm our operations and financial results.***

Our Fab 3 fabrication facility and its offices are leased under a contract in effect until 2022, which we can extend until 2027 through the exercise of an option at our sole discretion. A few years ago, the landlord began a construction project adjacent to the fabrication facility, which may adversely impact Fab 3 operations, including temporary reductions or interruptions in the supply of utilities to the property, and 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 may require substantial downtime to reset equipment before resuming production. These may cause customer dissatisfaction and cause customers to transfer their product orders to other fabs, which may adversely affect our financial results. In addition, the landlord has claimed that noise abatement actions that have been implemented according to obligations under the lease are not adequate under the terms of the lease. While we do not agree with, and are disputing, these claims, any adverse change to the current lease agreement may adversely impact our business and future financial results.

***A global recession and/or, unfavorable economic conditions, global disease, credit crisis and/or weakness in the semiconductor industry may adversely affect our results and our ability to fulfill our debt obligations and other liabilities.***

The effects of a global recession, unfavorable economic conditions, and/or global disease, such as the recent coronavirus pandemic, credit crisis and/or a weakness in the semiconductor industry may include global decreased demand, downward price pressure, excess inventory, shortage of supplies and materials for manufacturing and unutilized capacity worldwide, any of which may negatively impact consumer and customer demand for our products and the end products of our customers. Such an event may adversely affect our ability to attract new customers and new business to our fabs as well as maintain current customers. Such an event 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 an event 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 an event will not occur.

The recent coronavirus outbreak, which was declared a global pandemic by the World Health Organization during March 2020, and its continued progress, may adversely affect our revenue, business and financial results. We may face (i) a shortage of supply of raw materials, products and services due to local restrictions and possible isolation periods imposed by the governments of vendors, or due to no or limited international courier delivery services, which may adversely affect our ability to secure our supply chain and continue operating and manufacturing in one or more of our fabrication facilities; (ii) potential reduced attendance of employees and service providers to our facilities and offices due to local restrictions and isolation periods imposed on them by the local government, which may adversely affect our ability to continue operating and manufacturing at one or more of our facilities; and (iii) potential reductions in customer orders or pricing due to any related or resulting global economic downturn, which may adversely affect our business and financial results.

***Our reliance on acquisitions and/or gaining additional capacity for growth involve risks that may adversely affect our future revenues, business and operating results.***

We may decide to expand our manufacturing footprint and business by attracting new customers that will utilize our expanded capacity through acquisitions, as we have done in the past, and and/or through capturing and obtaining access to additional manufacturing capacities and/or facilities, with or without third-party collaboration. Our success at such expansion is dependent, in part, on finding suitable partners and targets for acquisitions, successfully financing and consummating such expansion plans, integrating the acquired facilities into our business and loading the facilities in an amount that may at least cover their operating and other costs. We cannot assure you that we will be successful in expanding our business, finding and successfully executing such acquisitions or capacity expansions 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 any such acquired facilities profitably.

This strategy involves many risks, each of which may negatively affect our profitability and financial position, including the following risks:

- We may fail to identify acquisitions and/or opportunities to capture additional capacity required for our customers 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 execution of an expansion plan may require the dedication of substantial management effort, time and resources which may divert management from our existing business operations or other strategic opportunities;
- We may fail to integrate acquisitions successfully and materialize our expansion plan 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;
- We may not be able to obtain sufficient financing which could limit our ability to engage in certain acquisitions and strategic engagements; and
- The amount or terms of financing actually required before and after acquisition may vary from our expectations, resulting in a need for more funding that may not be available to us in order to finance the operations of the target acquisition and to acquire additional machinery and equipment and adjust the target's manufacturing line to address our customer demand.

***Our financial results may be adversely affected if we are unable to operate our facilities at satisfactory utilization rates necessary to generate and maintain positive and sustainable gross, operating and net profits.***

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, while during periods when our facilities manufacture at high utilization rates we are able to cover our costs, at times when the utilization rate is low, the reduced revenues may not cover all of the costs since a large portion are fixed costs which remain constant, irrespective of the number of wafers manufactured. In addition, our depreciation costs and capital expenditure investments, as common in our industry, are relatively high. Our financial results, including our gross, operating and net profits, may be adversely impacted if customer demand for our products is not sufficient to enable us to operate our facilities consistently at satisfactory utilization rates necessary to generate and maintain revenue levels that would cover all of our costs.

***Our fabs' production performance metrics 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 mitigate any potential losses that may be caused by earthquakes and other natural disasters, including business interruption insurance, our insurance coverage may not compensate us fully for all of the losses we may incur. If any of our fabs were to be damaged or cease operations, even for a limited duration, as a result thereof, and if our insurance proves to be inadequate, our manufacturing capacity and revenues may be adversely affected, thereby exposing 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, thereby potentially causing a material adverse effect on our business, 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. Future product returns may have an adverse effect on our business and financial results.

***We are subject to risks related to our international operations.***

We generate 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 the risk factor below entitled: *“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;
- impact of 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 and global diseases, affecting the countries in which we manufacture and/or 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 and not 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.

In addition, Israel, the United States, Japan and other foreign countries may implement quotas, duties, taxes or other charges or restrictions upon the import or export of our products, leading to a reduction in sales and profitability in such countries. 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.

***The production lines of our fabs may stop for certain periods of time due to bottlenecks, power outages, water leaks, chemical leaks or other issues, which may adversely affect our cycle time, yield, and delivery schedules, potentially causing an immediate loss of revenue and profitability. In addition, affected customers may elect to transfer their product orders to other fabs, which could materially adversely affect our business and financial results.***

There are many events that may occur which may adversely affect the manufacturing process in our manufacturing facilities. 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 delivery schedules, which may cause an immediate loss of revenue and profitability in a particular period. In addition, affected customers may elect to transfer their product orders to other fabs, which could materially adversely affect our business, revenue, profitability and financial position over the longer term. While we try to mitigate any potential damage caused by such events and have insurance coverage, which may compensate us partially or fully against certain types of damages, we cannot ensure that such events will not have a negative effect on the Company,

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

As of December 31, 2019, we had approximately \$290 million of consolidated principal amount of long-term debt outstanding, comprised as follows: (1) Tower had approximately \$135 million outstanding principal amount of Series G debentures, payable in seven semi-annual consecutive equal installments from March 2020 to March 2023; (2) TPSCo had loans of approximately \$101 million principal amount (the “JP Loan”), carrying a fixed interest rate of approximately 2% per annum, with principal scheduled to be repaid in nine semiannual payments between the first quarter of 2021 and 2025; and (3) Tower and its affiliates had capital lease agreements outstanding in the amount of approximately \$54 million from JA Mitsui Leasing, repayable between 2020 and 2024. Carrying such an 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 the JP Loan or other expenses which are denominated in JPY; and
- potential enforcement by the lenders of their liens against our respective assets, as applicable, if an event of default occurs.

In order to service our debt, the applicable interest it carries 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.

***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;
- timing 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; and
- fluctuations in the USD to NIS exchange rate.

***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) unable to assure production of customers' next generation 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.

***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, including adjustment of the cash, equity and other components of compensation we offer our personnel.

***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 and margins in future periods and may cause actual revenue and results to fall short of expectations.***

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, which 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 revenue shortfalls caused by cancellations, rescheduling of orders or lower actual orders than quantities forecasted. Rescheduling may relate to quantities or delivery dates, and sometimes relates to the specifications of the products we are shipping. Consequently, we cannot be certain that orders on backlog will be shipped when expected or at all.

We expect that, in the future, our revenues in any quarter will continue to be substantially dependent upon purchase orders received in the immediately preceding quarter or two. 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. For these reasons, our backlog at any given date may not be a reliable indicator of our future revenues and, as a result, revenue and margins' forecasts, targets and guidance that we provide from time to time, may fall short of expectations.

***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 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 orders 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. In addition to the revenue 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, which may adversely affect our operating results 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 to the manufacturing process, 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; however, in several instances, 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.

***We are required to comply with the terms of the Israeli Investment Center approved plan and regulations, the terms of which may subject us to liability for specific payments and/or penalties.***

We have received grants under certain Israeli Government programs under the Israeli Law for the Encouragement of Capital Investments, 1959 (the "Investment Law"). In 2011, we received an approval certificate from the Investment Center of the Israeli Ministry of Economy and Industry ("Investment Center"), for an expansion program, pursuant to which we received approximately \$36 million in grants for investments made commencing 2006 and through 2012. In 2017, we received approval from the Investment Center for our final performance report in connection with such grant. Eligibility for these approved grants is subject to our satisfying certain conditions stipulated by the Investment Law and the regulations promulgated thereunder, as well as the criteria set forth in the respective certificates of approval for the grants. If we fail to meet these conditions, we may be subjected to significant payment requests and/or penalties by the Investment Center. In addition, in order to secure our obligations in connection with these investment grants, floating liens were registered in favor of the State of Israel on substantially all of our Israeli assets.

***We received Israeli government grants for certain of our research and development activities, the terms of which subject us to certain conditions and restrictions.***

We received grants from the Government of Israel through the Israel Innovation Authority ("IIA"), of the Ministry of Economy and Industry, for the financing of a portion of our research and development projects pursuant to the Encouragement of Research, Development and Technological Innovation in the Industry Law 5744-1984 (the "Innovation Law"). Under the terms of the Innovation Law and the grants that we received, the prior approval of the IIA is required for (among other things) the transfer of IIA-funded technology, intellectual property or know-how to a third party outside of Israel, including by way of license, which we may not receive. Any such approval would typically be subject to payment of a redemption fee, in the amount of up to six times the amount of the grants received (less paid royalties, if any, and depreciation, but no less than the total amount of grants actually received by us) plus accrued interest. The foregoing and other restrictions and requirements for payment under the Innovation Law and related regulations may impair our ability to sell our IIA-funded technology assets outside of Israel or to outsource or transfer development or manufacturing activities with respect to any IIA-funded technology outside of Israel.

***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 USD, JPY and NIS, our revenues are denominated mainly in USD and JPY and our cash from operations, investing and financing activities are denominated mainly in USD, JPY and NIS. We are, therefore, exposed to the risk of currency exchange rate fluctuations in Japan and Israel.

The USD cost of our operations in Israel is influenced by changes in the USD-to-NIS exchange rate with respect to costs that are denominated in NIS. During the year ended December 31, 2019, the USD depreciated against the NIS by 7.8%, as compared to 8.1% appreciation during the year ended December 31, 2018.

The fluctuation of the 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 NIS-denominated labor costs in USD terms, which may lead to erosion in our profit margins. We use foreign currency transactions to partially hedge a 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 the 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 is mostly offset by the impact on the expenses. In order to mitigate a portion of the net exposure to the USD / JPY exchange rate over the net profit margins, we have entered into hedging transactions which partially hedge our exposure to the currencies' fluctuation to be contained within a pre-defined fixed range.

During the year ended December 31, 2019, the USD depreciated against the JPY by 1.2%, as compared to 2.4% depreciation during the year ended December 31, 2018. The net effect of USD depreciation against the JPY on TPSCo's assets and liabilities denominated in JPY is presented in Cumulative Translation Adjustment as part of Other Comprehensive Income in the balance sheet.

In addition to currency exchange fluctuations, if any of TPSCo's banks incur increased costs in financing a 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 applicable credit facility agreement.

We also hold a securities investment portfolio, including interest bearing bonds and notes. An increase in the interest rates globally and other market changes may result in a reduced market value of these bonds and notes, thereby creating financing losses for us if we are unable to mitigate exposure, react to the market changes promptly and adjust our securities investment portfolio components in a timely manner.

Although, as described above, we regularly engage in various hedging strategies to reduce our exposure to these risks and intend to continue to do so in the future, we are likely to remain partially exposed to 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, 2019, we held 259 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 can be expensive. We cannot assure you that patents will be issued for 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, be able to 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 that may require management time and effort and may adversely affect us by harming our business, image and financial results.***

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 are 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 adversely impact our business and revenues.

***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, Fab 3's production processes in California, Fab 9's production processes in Texas and 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 mitigate any potential losses that may be caused by fire, including business interruption insurance, our insurance coverage may not compensate us fully for all losses incurred due to a fire. If any of our fabs were to be damaged and/or cease operations for a certain period of time as a result of a fire, and if our insurance proves to be inadequate, our manufacturing capacity and revenues may be adversely affected. In addition, a power outage, even of very limited duration, caused by a fire 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.

***Our business strategy is premised on the increasing use of outsourced foundry services by both fabless semiconductor companies and integrated device manufacturers. If this trend does not continue to develop in the manner we expect, our business and financial results may be adversely affected.***

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 be adversely impacted.

***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, thereby potentially harming our business.

***If we are unable to successfully locate and negotiate with third-party buyers for the sale of any excess and unused equipment, our financial results may be harmed.***

From time to time, we may decide to abandon certain product technology lines or a manufacturing facility due to company strategy, low margins or low customer demand, resulting in unused equipment that no longer supports our customers' needs and that, therefore, we may decide to sell to third-party buyers. We also have obsolete or unutilized equipment from time to time which we may sell. If we are unable to successfully locate and negotiate with potential buyers and sell the excess equipment in a timely manner for satisfactory consideration, we may be unable to cover our fixed and other costs associated with such decision, which may have a negative effect on our financial results.

***Compliance 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. Compliance with existing or evolving U.S., Israeli, Japanese or other applicable governmental regulations or obtaining timely domestic or foreign regulatory approvals or certificates may materially disrupt our business by reducing our sales, requiring extensive modifications to processes that we use in our product manufacturing and thereby increasing our manufacturing costs, 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 compensate us fully for claims that may be made against us. In addition, 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 workforce that is unionized may have an adverse impact on our manufacturing costs as well as on our operations by work stoppages, strikes or other collective actions which may disrupt the fabs' production and adversely affect the fabs' performance, our customers and our operational and financial results.***

A significant portion of the 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, 2018. 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. In addition, employees at our fabs in Israel, who currently are not members of any union, may wish to join a union in the future. We cannot predict the effect that union representation or future organizational activities will have on these fabs' manufacturing cost and business. Specifically, under TPSCo's collective bargaining agreement, the union and TPSCo 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 our fabs will not experience a material work stoppage, strike or other collective action in the future, or incur increased costs in connection with the renewal of such bargaining agreements or other potential union activities, which may disrupt their production and adversely affect our fabs' manufacturing costs, operational performance metrics, our customers and our operational and financial results.

***Climate change may negatively affect our business.***

There is increasing concern regarding climate change and its potential 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 snowstorms, 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 requirements enacted pursuant to the Dodd-Frank Act may affect our ability or the ability of our suppliers to purchase raw materials at an effective cost and may adversely affect our business.***

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 are subject to the requirements under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, or the Dodd-Frank Act, that require due diligence and disclosure as to whether our products contain conflict minerals. The Trump administration has indicated that the Dodd-Frank Act will be under further scrutiny and some of the provisions of the Dodd-Frank Act may be revised, repealed or amended. In April 2017, the SEC announced suspension of enforcement of portions of the conflict minerals regulations enacted under the Dodd-Frank Act following a ruling by the U.S. Court of Appeals for the District of Columbia Circuit. The potential implementation of these requirements and any changes effected by the Trump administration could adversely affect the sourcing, availability and pricing of the materials used in the manufacture of components used in our products. In addition, we will likely incur additional costs to comply with the disclosure requirements, including costs related to conducting diligence procedures to determine the sources of conflict minerals that may be used in or necessary to the production of our products and, if applicable, potential changes to our products, processes or sources of supply as a consequence of such verification activities. It is also possible that we may face reputational harm if we determine that certain of our products contain minerals not determined to be conflict-free or may lose customers and adversely impact our revenue and business if we are unable to alter our products, processes or sources of supply to avoid use of such materials. We may encounter challenges in satisfying those customers that require that all of the components of our products be certified as conflict free, and if we cannot satisfy these customers, they may choose a competitor’s products.

***Security, cyber and privacy breaches may hurt our business and operations.***

Any security breach, including those resulting from a cybersecurity attack, or any unauthorized access, unauthorized usage, virus or similar breach or disruption could result in the loss of confidential information, damage to our fab operations, damage to our reputation, early termination of our contracts, litigation, regulatory investigations or other liabilities. If our security measures are breached as a result of third-party action, employee error, malfeasance or otherwise and, as a result, someone obtains unauthorized access to our, our customers' or any third party’s confidential information, our reputation may be damaged, our business may suffer, and we could incur significant liability.

Techniques used to obtain unauthorized access or to sabotage systems change frequently and generally are not recognized until launched against a target. As a result, we may be unable to anticipate these techniques or to implement adequate preventative measures. If an actual or perceived security breach occurs, the market's perception of our security measures may be harmed and we could lose sales and customers as well as incur operational damage to our machines and/or products.

## **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 our equity and debt traded securities, regardless of our actual operating performance.

In addition, it is possible that our operating results may differ from the expectations of public market analysts and investors, which may adversely affect the price of our securities. Adverse impact to the market price of our 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.

***We are a foreign private issuer and, as a result, we are not subject to U.S. proxy rules and are subject to the Securities Exchange Act of 1934 reporting obligations that, to some extent, are more lenient and less frequent than those applicable to a U.S. issuer.***

We report under the Securities Exchange Act of 1934, as amended (the "Exchange Act") as a foreign private issuer. Because we qualify as a foreign private issuer under the Exchange Act, we are exempt from certain provisions of the Exchange Act that are applicable to U.S. public companies, including (i) the sections of the Exchange Act regulating the solicitation of proxies, consents or authorizations in respect of a security registered under the Exchange Act; (ii) the sections of the Exchange Act requiring insiders to file public reports of their stock ownership and trading activities and liability for insiders who profit from trades made in a short period of time; and (iii) the rules under the Exchange Act requiring the filing with the SEC of quarterly reports on Form 10-Q containing unaudited financial and other specified information, or current reports on Form 8-K, upon the occurrence of specified significant events. We intend to furnish quarterly reports to the SEC on Form 6-K for so long as we are subject to the reporting requirements of Section 13(g) or 15(d) of the Exchange Act, although the information we furnish may not be the same as the information that is required in quarterly reports on Form 10-Q for U.S. domestic issuers. In addition, while U.S. domestic issuers that are not large accelerated filers or accelerated filers are required to file their annual reports on Form 10-K within 90 days after the end of each fiscal year, foreign private issuers are not required to file their annual report on Form 20-F until 120 days after the end of each fiscal year. Foreign private issuers are also exempt from the Regulation FD (Fair Disclosure), aimed at preventing issuers from making selective disclosures of material information. Although we intend to make interim reports available to our shareholders in a timely manner, you may not have the same protections afforded to shareholders of companies that are not foreign private issuers.

***As a foreign private issuer, we are permitted, to follow, and follow, certain home country corporate governance practices instead of otherwise applicable Nasdaq requirements, which may result in less protection than is accorded to investors under rules applicable to domestic U.S. issuers.***

As a foreign private issuer, we are permitted to follow certain home country corporate governance practices instead of those otherwise required under the Listing Rules of the Nasdaq Stock Market for domestic U.S. issuers. For instance, we follow home country practice in Israel with regard to, among other things, the director nomination process, the approval of compensation of officers and quorum requirements at general meetings of our shareholders. In addition, we follow our home country law instead of the Listing Rules of the Nasdaq Stock Market that require us to obtain shareholder approval for certain dilutive events, such as the establishment or amendment of certain equity based compensation plans, an issuance that will result in a change of control of the company, certain transactions other than a public offering involving issuances of a 20% or greater interest in the company, and certain acquisitions of the stock or assets of another company. Following our home country governance practices as opposed to the requirements that would otherwise apply to a United States company listed on Nasdaq may provide less protection to you than what is accorded to investors under the Listing Rules of the Nasdaq Stock Market applicable to domestic U.S. issuers.

Similarly, as an Israeli company listed on the Nasdaq Stock Market and the TASE, we are permitted to rely on certain relief granted to foreign listed companies under regulations promulgated under the Companies Law. For instance, we adopted the exemption under Israel law permitting a company whose shares are traded on certain stock exchanges outside Israel (including the Nasdaq Global Select Market, such as our company) that does not have a controlling shareholder, from the requirement to appoint external directors under Israeli law and related provisions, including regarding the composition of the audit committee and compensation committee, provided that it complies with the requirements of the laws of the foreign jurisdiction where the company's shares are listed, as they apply to domestic issuers, with respect to the appointment of independent directors and the composition of the audit committee and compensation committee.

***If we lose our status as a foreign private issuer under the SEC's rules, our compliance costs will increase.***

We would lose our foreign private issuer status if more than 50 percent of our outstanding voting securities are directly or indirectly held of record by residents of the United States and if a majority of our directors or executive officers are U.S. citizens or residents and we fail to meet additional requirements necessary to avoid loss of foreign private issuer status. If we cease to qualify as a foreign private issuer, the regulatory and compliance costs for us under U.S. securities laws as a U.S. domestic issuer may be significantly higher. If we are not a foreign private issuer, we will be required to file periodic reports and registration statements on U.S. domestic issuer forms with the SEC, which are more detailed and extensive than the forms available to a foreign private issuer. We would also be required to follow U.S. proxy disclosure requirements, including the requirement to disclose more detailed information about the compensation of our senior executive officers on an individual basis. We may also be required to modify certain of our policies to comply with corporate governance practices associated with U.S. domestic issuers. Such conversion and modifications will involve additional costs. In addition, we may lose our ability to rely upon exemptions from certain corporate governance requirements on U.S. stock exchanges that are available to foreign private issuers.

***We do not expect to pay any dividends in the foreseeable future.***

We do not anticipate paying any dividends in the foreseeable future. We currently intend to retain future earnings to finance our growth and acquisition strategy, as well as capacity growth and our ongoing operations. Our board of directors has sole discretion whether to pay dividends. If our board of directors will decide to pay dividends, the form, frequency and amount will depend upon our future growth and acquisition strategy, as well as our capacity growth plans, future operations and earnings, capital requirements and surplus, general financial condition, contractual and legal restrictions and other factors that our directors may deem relevant. The Companies Law imposes restrictions on our ability to declare and pay dividends. Furthermore, under the indenture for our Series G Debentures, a distribution of dividends is subject to us satisfying certain financial covenants and is subject to certain limitations. Therefore, you should not rely on an investment in our ordinary shares if you require and/ or expect dividend income from your investments.

## Risks Related to Our Operations in Israel

### ***Instability in Israel may harm our business.***

Fab 1 and Fab 2 manufacturing facilities, our design center and certain of our corporate and sales offices are located in Israel. In addition, a number of our officers and directors are residents of Israel. Accordingly, political, economic and military conditions in Israel and the surrounding region may directly affect our business.

Since the establishment of the State of Israel in 1948, Israel has been subject to arm conflicts with neighboring countries, as well as terrorist activities, 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 any such conflicts result in any serious damage to such manufacturing facilities. In addition, there may also be protests against or sanctions imposed on the State of Israel which may adversely impact our business. Our business interruption insurance may not adequately compensate us for losses that we may incur, and any losses or damages incurred by us may have a material adverse effect on our business. Furthermore, several countries restrict business with the State of Israel and with Israeli companies, which may have an adverse impact on our operating results and financial condition.

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 our 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 our business.

***If the exemption allowing us to operate our Israeli manufacturing facilities seven days a week 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 timely renew) from the law that requires businesses in Israel to be closed from sundown on Friday through sundown on Saturday. In addition, our business license certificate issued by municipality of Migdal Ha'emek, Israel is required to be renewed periodically. If such exemption 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 and directors or to assert US securities law claims in Israel or serve process on our non-U.S. resident officers and directors.***

Tower is incorporated in Israel and most of its executive officers and directors are not residents of the United States (excluding the employees of its U.S. subsidiaries), and a majority of its assets (excluding its U.S. subsidiaries and their assets) and the assets of its non-U.S. resident directors and officers are located outside the United States. Service of process upon us or our non-U.S. resident directors, officers may be difficult to obtain within the United States. Additionally, a judgment obtained in the United States against Tower or any of our non-U.S. 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 assert claims under U.S. securities laws or obtain a judgment based on civil liability provisions under U.S. federal securities laws claimed in original actions instituted in Israel. Israeli courts may refuse to hear a claim based on a violation of U.S. securities laws against us or our non-U.S. officers and directors because Israel may not be the most appropriate forum to bring such a claim. In addition, even if an Israeli court agrees to hear a claim, it may determine that Israeli law and not U.S. law is applicable to the claim. If U.S. law is found to be applicable, the content of applicable U.S. law must be proved as a fact, which can be a time-consuming and costly process. Certain matters of procedure will also be governed by Israeli law. There is little binding case law in Israel addressing the matters described above.

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

Provisions of Israeli law could have the effect of delaying or preventing a change in control and may make it more difficult for a third-party to acquire us, even if doing so would be considered to be beneficial by some of our shareholders. For example, Israeli corporate law regulates mergers, requires tender offers for acquisitions of shares of a public company 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. 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 our shareholders will be governed by Israeli law which differs in some material respects from the rights and responsibilities of shareholders of U.S. corporations.***

The rights and responsibilities of the holders of our ordinary shares are governed by our 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 in a customary manner in exercising his or her rights and fulfilling his or her obligations towards the company and other shareholders and to refrain from abusing its power in the company, including, among other things, in voting at the general meeting of shareholders on amendments to a company's articles of association, increases in a company's authorized share capital, mergers and certain transactions requiring shareholders' approval under the Companies Law. In addition, a controlling shareholder of an Israeli company or a shareholder who knows that it possesses the power to determine the outcome of a shareholder vote or who has the power to appoint or prevent the appointment of a director or officer in the company or has other powers toward the company has a duty of fairness toward the company. However, Israeli law does not define the substance of this duty of fairness. There is limited case law available to assist in understanding the implications of these provisions. These provisions may be interpreted to impose additional obligations and liabilities on holders of our 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, aerospace 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. We manufacture standard analog complementary metal oxide semiconductor (“CMOS”) process technology, which is a widely used method of producing ICs, and we specialize in specific technologies including CMOS image sensors, non-imaging 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, power management and Gallium Nitride (GaN) devices. To better serve our customers, we have developed and are continuously expanding our technology offerings in these fields. Through our experience and expertise gained during more than twenty five years of operation, we differentiate ourselves by creating a high level of value for our customers 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. Recently, we integrated advanced single Poly NVM into the Fab 1 process flows and developed a GaN technological platform (GaN on Si) suitable for fabrication of HEMT transistors, gas and UV sensors.

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), and specifically RF switches on SOI, power platforms and mixed-signal technologies.

In September 2008, we merged with Tower NPB. NPB Co. 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. NPB Co.’s specialty process technologies include advanced analog, radio frequency, high voltage, bipolar, SOI and silicon germanium bipolar, complementary metal oxide (“SiGe”) semiconductor processes. ICs manufactured by NPB Co. 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. NPB Co. operates Fab 3 located in Newport Beach, California, US.

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 three semiconductor factories located in Hokuriku Japan (Uozu E, Tonami CD and Arai E), which factories were established by Panasonic. Pursuant to the transaction, Panasonic transferred its semiconductor wafer manufacturing process and capacity tools (8 inch and 12 inch) at the three fabs to TPSCo, and entered into a five-year manufacturing agreement for the manufacture of products for Panasonic by TPSCo, which was extended in March 2019 for an additional three years, under amended terms, including a revised pricing structure.

In February 2016, we acquired Fab 9, located in San Antonio, Texas, US, from Maxim. The assets and related business that we acquired from Maxim are held and conducted through one of our wholly-owned US subsidiaries, Tower SA. Fab 9 supports process geometries ranging from 0.80 to 0.18 for the manufacture of products using CMOS, power management 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.towersemi.com](http://www.towersemi.com). Information on our website is not incorporated by reference in this annual report.

## **B. BUSINESS OVERVIEW**

### **INDUSTRY OVERVIEW**

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 (“IDM”). 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 development, and tend to outsource manufacturing to foundries.

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 systems enabled with Artificial Intelligence, products related to Internet of Things (IoT) in particular ASICs 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 services. 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), bipolar CMOS double-diffused metal oxide semiconductor (BCD), NVM technologies and special devices for enabling chips with Artificial Intelligence. 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 may also offer customers competitive complementary services 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, decreased footprint of products, performance and cost advantages 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 technology nodes. 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 IDMs that wish to manufacture products using their own process and do not have sufficient capacity in their own fabs. 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 an advanced technology node which is very costly to build themselves. Our process transfer 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 SOI, integrated into back-end-of-line (BEOL) TMR/MTJ (magnetic tunnel junction) sensors, SiGe and MEMS, among others.

We are a trusted, customer-oriented service provider that has built a solid reputation in the foundry industry over more than twenty-five years. We have built strong relationships with customers. Our consistent focus on providing high-quality, value add 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 and performance of their next-generation products has enabled us to maintain a high customer retention rate, while increasing the number of new customers and new products for production.

We continuously target to expand our manufacturing footprint and business by attracting new customers that will utilize our existing manufacturing facilities, some of which have recently implemented further capacity expansion projects, as well as by acquiring external capacity through acquisitions of existing or newly established fabs, as we have done in the past, with or without third-party collaboration and/or funding (including cash, equity or in-kind investment). We also offer from time to time a wide range of support services for the establishment of new semiconductor fabrication facilities or the ramp of existing facilities owned by third parties, based on our technological, operational and integration expertise, for which we receive payments based on the achievement of pre-defined milestones and may also be entitled to certain capacity allocation and other rights, all subject to definitive agreements underlying such projects.

We derived a very significant amount of our revenues for the year ended December 31, 2019 from our target specialized markets: RF CMOS, including SiGe 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), including SiGe 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) platforms for power management, RF and sensor applications, LDMOS transistors, sensors based on GaN (gallium nitride) technology, and technologies for enabling Artificial Intelligence , in particular original Y-Flash memristors.

## **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 ToF (time of flight) 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 include 110nm on 200mm wafers and 65nm on 300mm wafers with pixel sizes down to 1.12 micron utilizing dual light pipe technology and deliver outstanding image quality for a broad spectrum of digital imaging applications.

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 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, enabling the manufacturing of very sophisticated and high performance camera module solutions. Our state-of-the-art pixels are used in a variety of new markets such as the high-end machine vision cameras and the rapidly growing security camera markets. In addition, our advanced global shutter technology and global shutter pixels, as small as 2.5um, enable excellent performance, especially, very high shutter efficiency.

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 specially developed our near Infra-Red imaging technology 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.

Our BSI (Backside Illumination) technology was developed for both 200mm and 300mm wafers. For the 200mm wafers, we cooperate with YCM (YuanChen Microelectronics) in China that manufactures the BSI part of the process on our wafers, using our own developed BSI technology. For the 300mm wafers, we provide stacked wafer technology, where two wafers (a CMOS wafer and a CIS wafer) are connected electrically to provide high functionality on a CMOS Image Sensor.

In addition, we developed SPAD (single photon avalanche detectors) for LIDAR (light detection and range) applications in smart automotive advanced driver assistance systems (ADAS) and autonomous driving (AD) vehicles. Our technology allows us to combine CMOS, image sensors and SPADs on the same chip.

### ***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 of our competitors and are well suited for wireless electronics, such as highly integrated transceivers, power amplifiers, and television tuners. These process technologies generally incorporate integrated inductors, high performance variable capacitors and RF laterally diffused metal oxide semiconductors transistors into an advanced analog CMOS process technology. In addition to the smart 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 RFCMOS process built on silicon-on-insulator (SOI) substrates (RFSOI). These RFSOI process technologies include devices optimized to deliver higher performance and improved isolation relative to devices in our RFCMOS process. We currently have RFSOI 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 smartphones, 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 assume 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 silicon germanium bipolar transistors, which are 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 linewidth. 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. 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 high-voltage offering including 140V Resurf, 200V SOI and 700V ultra-high voltage technologies. 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  $R_{ds(on)}$  BCD offerings in 0.5 micron, 0.35 micron, 0.25 micron, 0.18 micron and 65 nanometer. We offer a cost effective and digital intensive power management platform, based on our 0.18um technology node with advanced isolation options (in particular SOI based), that allow our customers to design high performance products as well as products with the high level of integration. We recently qualified an advanced 65nm BCD platform which is advantageous for a variety of products, such as PMICs, load switches, DC-DC converters, LED drivers, analog, digital controllers, and more. The process includes up to 16V LDMOS transistors with ultra-low  $R_{ds(on)}$  (less than  $1m\Omega \cdot mm^2$  for the 5V devices) and features very low metal resistance (single or dual 3.3um top thick copper).

Our high voltage technologies, which include 140V Resurf, 200V SOI and 700V ultra-high voltage platform, support applications such as gate drivers for discrete high-power transistors and automotive, industrial, AC adaptor and lighting markets.

In addition, we have developed a unique, zero mask adder NVM solution (Y-Flash) specifically for power and power management applications in 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 have also introduced high density single Poly silicon memory arrays of other intellectual property vendors into our CMOS process flows.

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 for sensor applications and technologies aimed at integrating micro-electro-mechanical-system (MEMS) devices with CMOS, scaling the features we offer today to the 65 nanometer process, including the integration of advanced SiGe transistors with 65 nanometer CMOS and copper metallization and investing in development of Silicon Photonics technology.

## **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, field application engineers and customer support personnel in Israel, Japan, Korea, Taiwan and the United States. In selected markets, including China, Europe, our global marketing and sales staff is supported by local 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 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, 2019, we had six significant customers that each contributed between 5% to 27% of our revenues. During the year ended December 31, 2018, we had four significant customers that each contributed between 7% to 33% of our revenues. During the year ended 2017, we had four significant customers that each contributed between 7% to 30% of our revenues.

The following table sets forth the geographical distribution, by percentage, of our net revenues for the periods indicated:

	<b>Year ended December 31,</b>		
	<b>2019</b>	<b>2018</b>	<b>2017</b>
United States	52%	52%	52%
Japan	29%	34%	32%
Asia, excluding Japan*	15%	10%	12%
Europe	4%	4%	4%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

\* Represents revenues from individual countries of less than 10% each.

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.

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, magnetic field , gas and UV sensors.

## COMPETITION

The global semiconductor foundry industry is highly competitive. We compete most directly in the specialty segment with foundries such as Global Foundries (mainly in the RF business), 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”), and Semiconductor Manufacturing International Corp. (“SMIC”). These three pure-play semiconductor 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. This includes existing Chinese, Korean and Malaysian foundries. We also compete with IDMs that have internal semiconductor manufacturing capacity or foundry operations, such as ST, Intel, Samsung, Sony 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 that benefit from their close proximity to companies involved in the design of ICs and 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, may have greater scope and/or a greater number of research and development resources, 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, research and development, 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 10-14 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 manufacture 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.

## 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 specialty 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 Government of the State of Israel through the IIA, pursuant to the Innovation Law and related regulations and guidelines. Under the terms of the Israeli Government participation and the Innovation Law as currently in effect, a royalty of 3% or up to 5% of the net sales of products and services developed from a project funded by the IIA must generally be paid to the IIA, up to an aggregate of 100% (which may be increased under certain circumstances) of the U.S. dollar-linked value of the grant, plus interest at the rate of 12-month LIBOR. The Innovation Law imposes significant restrictions on manufacturing of products developed with IIA grants outside Israel and on the transfer (including by way of license) of IIA-funded technologies to third parties outside Israel. Transfer or license of IIA-funded technologies to third parties outside Israel requires the prior approval of the IIA, which approval is generally contingent on payment of a redemption fee of up to six times the grant amount (less paid royalties, if any, and depreciation, but no less than the total amount of grants actually received by us), plus accrued interest. See "Item 3. Key Information—D. Risk Factors—Risks Affecting Our Business—*We received Israeli government grants for certain of our research and development activities, the terms of which subject us to certain conditions and restrictions*".

In addition to the above, 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, 2019, 2018 and 2017 were \$75.6 million, \$73.1 million and \$67.7 million, respectively, net of government participation of \$0.7 million, \$1.4 million and \$0.9 million, respectively. As of December 31, 2019, we employed 428 professionals in our research and development departments, 32 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**

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, 2019, we held 259 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, Artificial Intelligence, 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, cell libraries and specialized IPs (e.g. NVM) 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.

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 ourselves from such 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 periodic 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.

## **JAZZ SEMICONDUCTOR TRUSTED FOUNDRY**

For purposes of our U.S. aerospace and defense business, Tower and Tower NPB 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 in Fab 3, specifically relating to protection of classified information and prevention of potential unauthorized access by creating Jazz Semiconductor Trusted Foundry ("JSTF") as a subsidiary of Newport Fab LLC, which is directly held by NPB Co., and limiting possession of all classified information solely to JSTF. In addition, Fab 3 has obtained facility security clearance and trusted foundry status.

### **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 Tower Semiconductor NPB Holdings, Inc., which owns all of the shares of Tower Semiconductor Newport Beach, Inc. (all three companies are incorporated under the laws of the State of Delaware), which operates our Fab 3 facility.

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.

## 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 in Newport Beach, California in the U.S., TPSCo's three fabs (Arai E, Uozo E and Tonami CD) in Japan, and Fab 9 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 2019 and 2018 were approximately \$172 million and \$170 million, respectively, net of proceeds from sale of equipment and fixed assets of approximately \$19 million and \$40 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*

NPB Co.'s manufacturing facility, Fab 3, and offices 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.

NPB Co's leases its fabrication facility and offices under a lease that is in effect until 2022, and can extend the lease until 2027 through the exercise of an option at our sole discretion. Under the lease as currently in effect, (i) NPB Co's rental payments consist of fixed base rent and fixed management fees and NPB Co'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; and (ii) the lease includes certain obligations of the parties, including certain noise abatement actions at the fabrication facility. The landlord has claimed that noise abatement actions that have been implemented are not adequate under the terms of the lease. We do not agree with, and are disputing, these claims. See "Item 3. Key Information—D. Risk Factors—Risks Affecting Our Business— *Risks relating to construction activities adjacent to Fab 3 and our Fab 3 lease could harm our operations and financial results.*"

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 three semiconductor factories located in Hokuriku, Japan, which factories were established by Panasonic. 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. The fabs' land and buildings are leased by PSCS to TPSCo.

#### Fab 9

In February 2016, we acquired Fab 9 in San Antonio Texas, USA from Maxim. The assets and related business that we acquired from Maxim are held and conducted through a wholly-owned US subsidiary, Tower SA. 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 the acquisition agreement, until the termination or expiration of the supply agreement entered into between Maxim and Tower SA, 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 IATF16949 certified, a stringent automotive quality standard.

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.

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.

Our goal in implementing OHSAS 18001, ISO 14001, ISO 9001 and IATF16949 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

*The information contained in this section should be read in conjunction with our audited consolidated financial statements for the years ended December 31, 2019 and 2018 and related notes and the information contained elsewhere in this annual report. Our financial statements have been prepared in accordance with US GAAP. The following discussion and analysis may contain forward-looking statements that involve risks and uncertainties. Our actual results and the timing of selected events could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Item 3. Key Information—D. Risk Factors" and elsewhere in this annual report.*

##### Critical Accounting Policies

###### *Marketable securities*

We account for investments in debt securities in accordance with ASC 320, "Investments - Debt and Equity Securities." Management determines the appropriate classification of its investments in debt securities at the time of purchase and re-evaluates such determinations at each balance sheet date.

Marketable securities classified as "available-for-sale" are carried at fair value, based on quoted market prices. Unrealized gains and losses are reported in a separate component of shareholders' equity in accumulated other comprehensive income ("OCI"). Gains and losses are recognized when realized, on a specific identification basis, in our consolidated statements of income.

Our securities are reviewed for impairment in accordance with ASC 320-10-35. If such assets are considered to be impaired, the impairment charge is recognized in earnings when a decline in the fair value of its investments below the cost basis is judged to be other-than-temporary. Factors considered in making such a determination include the duration and severity of the impairment, the reason for the decline in value, the potential recovery period and our intent to sell, including whether it is more likely than not that we will be required to sell the investment before recovery of cost basis. For securities that we intend to sell with an unrealized loss, or in cases that it is more likely than not that we will be required to sell before recovery of their amortized cost basis, the entire difference between amortized cost and fair value is recognized in earnings.

For securities that do not meet these criteria, the amount of impairment recognized in earnings is limited to the amount related to credit losses, while declines in fair value related to other factors are recognized in OCI.

If quoted prices for identical instruments are available in an active market, marketable securities are classified within Level 1 of the fair value hierarchy. If quoted prices for identical instruments in active markets are not available, fair values are estimated using quoted prices of similar instruments and are classified within Level 2 of the fair value hierarchy.

###### *Revenue Recognition*

ASC Topic 606 "Revenue from Contracts with Customers" ("Topic 606"), supersedes the previous revenue recognition guidance and industry-specific guidance under ASC Topic 605 "Revenue Recognition". Topic 606 requires an entity to recognize revenue when it transfers the control of promised goods or services to customers in an amount that reflects the consideration the entity expects to be entitled to in exchange for those goods or services. We adopted Topic 606 on January 1, 2018, using the modified retrospective method applied to contracts that were not completed as of January 1, 2018.

Under the modified retrospective method, prior period financial positions and results are not adjusted. There was no transition adjustment to our retained earnings upon adoption.

Our revenues are generated principally from sales of semiconductor wafers. To a lesser extent, we derive revenues from design support and other technical and support services incidental to the sale of semiconductor wafers. The vast majority of our sales are achieved through the effort of our direct sales force.

Wafer sales are recognized at a point in time, which is upon shipment or upon delivery of the our products to unaffiliated customers, depending on shipping terms. Accordingly, control of the products transfers to the customer in accordance with the transaction's shipping terms. Sales revenue is recognized for the amount of consideration that we expect to be entitled to in exchange for our products. Taxes imposed by governmental authorities, such as sales taxes or value-added taxes, are excluded from net sales. Our contracts typically contain a single performance obligation that is fulfilled on the date of delivery based on shipping terms stipulated in the contract.

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, which has been in immaterial amounts.

We provide our customers with other services that are less significant in scope and amount and for which recognition is over time when customer receives the services.

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 the 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. Fixed and intangible assets depreciation and amortization expenses in 2019 amounted to \$198 million. 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.

#### *Income Taxes*

We account for income taxes using an asset and liability approach as prescribed in ASC 740-10 "Income Taxes" ("ASC 740-10"). 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 the potential realization of our 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, see Note 19 to our annual financial statements included herein.

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.

Our provision for income taxes is affected by income taxes in Israel, the United States and Japan. The income tax provision is an estimate determined based on management's understanding of current enacted tax laws and tax rates of each tax jurisdiction and the use of acceptable allocation methodologies (transfer pricing) to allocate taxable income between tax jurisdictions based upon the structure of our operations and customer arrangements. Subsidiaries that are semiconductors fabrications located outside Israel are dependent on the allocation of production orders, managed centrally by the corporate global planning division, which directly affects the generation of income and local taxable income. For the year-ended December 31, 2019, the consolidated provision for income taxes was \$2.9 million comprised of amounts related to Israel, Japan and U.S. operations, as detailed in Note 19 to our annual financial statements included herein.

### *Leases*

In February 2016, the Financial Accounting Standards Board ("FASB") issued ASU No. 2016-02, "Leases" ("Topic 842"), which requires lessees to recognize a right-of-use ("ROU") asset and a lease liability for all operating and capital leases with a term greater than twelve months and also requires disclosures by lessees and lessors about the amount, timing and uncertainty of cash flows arising from leases. Subsequent to the issuance of Topic 842, the FASB clarified the guidance through several ASUs ("ASC 842").

On January 1, 2019, the Company adopted ASC 842 using the modified retrospective transition method. Results for the reporting period beginning January 1, 2019 are presented under ASC 842, while prior period amounts were not adjusted and continue to be reported in accordance with historical accounting under ASC 840, "Leases". Due to the adoption of ASC 842, as of December 31, 2019, operating lease ROU in the amount of approximately \$18 million are recorded as assets and as operating lease liabilities. The aforementioned did not have any impact on the results of operations or cash flows.

For all leases that commenced before the effective date of ASC 842, the permitted "practical expedients" as stipulated in the ASC was elected and accordingly, we did not reassess: (1) whether any expired or existing contracts contain leases; (2) the lease classification for any expired or existing leases; and (3) initial direct costs for any existing leases.

The determination regarding whether an arrangement is a lease is to be made at the inception of a lease contract. ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. ROU assets and lease liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. Whenever leases do not provide an implicit interest rate, incremental borrowing rate is used based on the information available at commencement date in determining the present value of lease payments. The lease terms used to calculate the ROU asset and related lease liability include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Lease expense for operating leases is recognized on a straight-line basis over the lease term as an operating expense. Certain lease agreements require payments for lease and non-lease components, and we elected to account for these as a single lease component related to other operating facilities. For additional information, see Notes 11D and 11E to our annual financial statements included herein.

For recently issued accounting pronouncements see Note 2W to our annual financial statements included herein.

## Results of Operations

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with the financial statements and the related notes thereto included in this annual report. The following table sets forth certain statement of operations data as a percentage of total revenues for the years indicated.

	Year ended December 31,		
	2019	2018	2017
<b>Statement of Operations Data:</b>			
Revenues	100%	100%	100%
Cost of revenues	81.4	77.5	74.5
Gross Profit	18.6	22.5	25.5
Research and development expense	6.1	5.6	4.9
Marketing, general and administrative expense	5.5	5.0	4.8
Operating profit	7.0	11.9	15.8
Financing income (expense), net	0.0	(1.0)	(1.1)
Other income(expense), net	0.3	(0.2)	(0.2)
Profit before tax	7.3	10.7	14.5
Income tax benefit (expense)	(0.2)	(0.5)	7.2
Net profit	7.1	10.2	21.7
Net loss (income) attributable to non-controlling interest	0.2	0.2	(0.3)
Net profit attributable to the Company	7.3%	10.4%	21.4%

### Year ended December 31, 2019 compared to year ended December 31, 2018

*Revenues.* Revenues for the year ended December 31, 2019 were \$1,234.0 million, as compared to \$1,304.0 million for the year ended December 31, 2018. The \$70.0 million decrease in revenue is attributed mainly to a revenue reduction from PSCS, primarily resulting from the terms of three-year contracts entered into in March 2019 between Tower, TPSCo and PSCS, renewing the previously signed 2014-2019 contracts. Under the renewed contracts, among other things, PSCS continues to utilize TPSCo's manufacturing facilities in Japan for its semiconductor business under a new pricing structure, which results in lower prices charged to PSCS and therefore, lower annual and quarterly revenue commencing the second quarter of 2019, as compared to previous periods.

*Cost of Revenues.* Cost of revenues for the year ended December 31, 2019 amounted to \$1,004.3 million as compared to \$1,011.1 million for the year ended December 31, 2018. This decrease of only \$6.8 million in manufacturing cost, as compared to the \$70.0 million reduced revenues, is attributed mainly to the reduced prices charged to PSCS, as described above, while a large portion of our cost of revenues is comprised of fixed cost.

*Gross Profit.* Gross profit for the year ended December 31, 2019 amounted to \$229.7 million as compared to \$292.9 million for the year ended December 31, 2018. The \$63.2 million decrease in gross profit resulted mainly from the \$70.0 million revenue reduction described above, while the decrease in cost of revenues was only \$6.8 million, as described above.

*Research and Development.* Research and development expense for the year ended December 31, 2019, amounted to \$75.6 million as compared to \$73.1 million for the year ended December 31, 2018. The \$2.5 million increase in research and development expense reflects our focus on enhancing our mid-term and long-term products' funnel, technology capabilities and future design wins.

*Marketing, General and Administrative.* Marketing, general and administrative expense for the year ended December 31, 2019 amounted to \$67.4 million, an increase of \$2.4 million as compared to \$65.0 million for the year ended December 31, 2018.

*Operating Profit.* Operating profit for the year ended December 31, 2019 amounted to \$86.7 million as compared to \$154.9 million for the year ended December 31, 2018. The \$68.2 million decrease in operating profit resulted mainly from the \$63.2 million reduction in gross profit described above.

*Financing Income (Expense), Net.* Financing income, net for the year ended December 31, 2019 amounted to \$0.01 million as compared to financing expense, net of \$13.2 million for the year ended December 31, 2018. During the year ended December 31, 2019, interest income was higher resulting from a higher balance of interest-bearing bank deposits and investment in marketable securities and higher yields, profits and interest income with respect to such deposits and securities; and financing expense was lower than in 2018, mainly due to the full conversion of Tower NPB Notes during 2018, as well as the early repayment in July 2018 of a \$40 million loan that Tower SA, our fully-owned U.S. subsidiary, borrowed in 2016 from JA Mitsui (US), in connection with the acquisition of the San Antonio fab from Maxim.

*Other Income (Expense), Net.* Other income, net for the year ended December 31, 2019 amounted to \$4.3 million as compared to other expense, net of \$2.4 million for the year ended December 31, 2018. The \$6.7 million increase in other income, net is mainly due to the measurement of our investments in privately held companies in accordance with ASC 321, as detailed in Notes 2I and 12E to our annual financial statements included herein.

*Income Tax Expense, Net.* Income tax expense, net for the year ended December 31, 2019 amounted to \$2.9 million as compared to \$5.9 million for the year ended December 31, 2018. The \$3.0 million decrease in income tax expense, net mainly resulted from the \$48.3 million decrease in profit before tax as described above.

*Net Profit.* Net profit for the year ended December 31, 2019 amounted to \$90.0 million as compared to a net profit of \$135.6 million for the year ended December 31, 2018. The \$45.6 million decrease in net profit was mainly due to the decrease of \$68.2 million in operating profit, offset in part by a \$13.2 million increase in financing income, net, \$6.7 million increase in other income, net and \$3.0 million decrease in income tax expense, as described above.

#### **Year ended December 31, 2018 compared to year ended December 31, 2017**

*Revenues.* Revenues for the year ended December 31, 2018 were \$1,304 million, as compared to \$1,387 million for the year ended December 31, 2017. While our average selling price per layer didn't change in 2018 as compared to 2017, our revenue was 6% lower, mainly due to lower number of layers shipped by the Company during 2018, as compared with 2017.

*Cost of Revenues.* Cost of revenues for the year ended December 31, 2018 amounted to \$1,011 million as compared to \$1,033 million for the year ended December 31, 2017. The decrease of \$22 million in manufacturing cost is mainly attributed to a lower amount of variable costs required to be spent to manufacture a lower volume of layers ordered, manufactured and shipped by the Company.

*Gross Profit.* Gross profit for the year ended December 31, 2018 amounted to \$293 million as compared to \$354 million for the year ended December 31, 2017. The decrease in gross profit resulted directly from the 6% or \$83 million revenue reduction described above, partially offset by the \$22 million cost reduction described above.

*Research and Development.* Research and development expense for the year ended December 31, 2018, amounted to \$73.1 million as compared to \$67.7 million recorded in the year ended December 31, 2017, an 8% increase which reflects our focus on enhancing our mid-term and long-term products' funnel, technology capabilities and future design wins.

*Marketing, General and Administrative.* Marketing, general and administrative expense for the year ended December 31, 2018 amounted to \$65.0 million, as compared to \$66.8 million recorded in the year ended December 31, 2017, both representing 5% of revenues.

*Operating Profit.* Operating profit for the year ended December 31, 2018 amounted to \$154.9 million as compared to \$219.8 million for the year ended December 31, 2017. The \$64.9 million decrease in operating profit resulted mainly from the \$61.4 million reduction in gross profit described above.

*Financing Expense, Net.* Financing expense, net for the year ended December 31, 2018 amounted to \$13.2 million as compared to financing expense, net of \$15.4 million for the year ended December 31, 2017. The main reason for the decrease in financing expense, net was a higher level of interest income we earned from our higher balance of interest-bearing bank deposits and our investment in marketable securities.

*Other expense, Net.* Other expense, net for the year ended December 31, 2018 amounted to \$2.4 million as compared with other expense of \$2.6 million in the year ended December 31, 2017.

*Income Tax Benefit (Expense), Net.* Income tax benefit (expense), net for the year ended December 31, 2018 amounted to \$5.9 million expense, net as compared to \$99.9 million income tax benefit, net in the year ended December 31, 2017. Income tax benefit, net for the year ended December 31, 2017 included mainly (i) \$82 million income tax benefit resulted from the release of valuation allowance with regards to the net operating loss carryforward in the Israeli parent company (Tower Semiconductor Ltd), since it was concluded that it is more-likely-than-not that such deferred tax assets will be realized, and (ii) \$13 million income tax benefit resulted from the US Tax Cut and Jobs Act which has been signed into law in December 2017, following which, among others, there was a reduction in federal income tax rates from 35% to 21%. Income tax expense, net for the year ended December 31, 2018, included a change in deferred tax assets, at a rate of 7.5%, as a result of utilizing our losses carried forward against current year taxable income.

*Net Profit.* Net profit for the year ended December 31, 2018 amounted to \$135.6 million as compared to a net profit of \$298.0 million for the year ended December 31, 2017. The decrease in net profit in the amount of \$162.4 million was mainly due to the decrease of \$105.8 million in income tax benefit, net as explained above and the decrease of \$64.9 million in operating profit as described above.

### **Impact of Currency Fluctuations**

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

The USD cost of our operations in Israel is influenced by changes in the USD to NIS exchange rate, with respect to costs that are denominated in NIS. During the year ended December 31, 2019, the USD depreciated against the NIS by 7.8%, as compared to 8.1% appreciation during the year ended December 31, 2018.

The fluctuation of the USD against the NIS can affect our results of operations as it relates to the entity in Israel. Appreciation of the NIS has the effect of increasing the cost, in USD terms, of some of the purchases and labor costs that are denominated in NIS, which may lead to erosion in the profit margins. The Company uses foreign currency cylinder transactions to hedge a portion of this currency exposure to be contained within a pre-defined fixed range. In addition, we executed swap-hedging transactions to hedge the exposure to the fluctuation of the USD against the NIS to the extent it relates to non-convertible Series G debentures, which are denominated in NIS.

The majority of TPSCo revenues are denominated in JPY and the majority of TPSCo expenses are in JPY, which limits the exposure to fluctuations of the USD / JPY exchange rate on TPSCo's results of operations. In order to mitigate a portion of the net exposure to the USD / JPY exchange rate, the Company has engaged in cylinder hedging transactions to contain the currency's fluctuation within a pre-defined fixed range.

During the year ended December 31, 2019, the USD depreciated against the JPY by 1.2%, as compared to 2.4% depreciation during the year ended December 31, 2018. The net effect of USD depreciation against the JPY on TPSCo's assets and liabilities denominated in JPY is presented in the Cumulative Translation Adjustment as part of Other Comprehensive Income in the balance sheet.

## **B. LIQUIDITY AND CAPITAL RESOURCES**

As of December 31, 2019, we had an aggregate amount of \$355.6 million in cash and cash equivalents, as compared to \$385.1 million as of December 31, 2018. The main cash activities during the year ended December 31, 2019 were: \$291.3 million net cash provided by operating activities; \$172.2 million invested in property and equipment, net of proceeds received from sales of equipment; \$132.9 million invested in short-term deposits, marketable securities and other assets, net; and \$19.4 million debt repaid.

Long-term debt and short-term debt presented on the balance sheet as of December 31, 2019 include bank loans, debentures, operating leases and capital leases, and totaled \$245.8 million and \$65.9 million, respectively, as of such date. As of December 31, 2019, the aggregate principal amount of debentures was \$135.4 million and its carrying amount in the balance sheet was \$132.3 million, of which \$37.7 million was presented as short-term liability.

### ***Recent Financing Transactions:***

#### ***Capital Leases***

Certain of our subsidiaries enter into, from time to time, capital lease agreements for certain machinery and equipment operated in some of our fabrication facilities, usually for a period of four years, with an option to buy the machinery and equipment after a period of between three to four years from the start of the lease period. The lease agreements contain annual interest rate of up to 1.95% and the assets under the lease agreements are pledged to the lender until the time at which the respective subsidiary will buy the assets. The obligations under the capital lease agreements are guaranteed by Tower, except for TPSCo's obligations under its capital lease agreements.

As of December 31, 2019 and 2018, the outstanding capital lease liabilities for fixed assets was \$60.2 million and \$47.2 million, respectively, of which \$21.1 million and \$10.8 million respectively, were included under current maturities of long-term debt.

In June 2016, Tower raised approximately \$115 million through the issuance of long-term unsecured non-convertible debentures (“Series G Debentures”) payable in seven semi-annual consecutive equal installments from March 2020 to March 2023 and carrying annual fixed interest rate of 2.79% payable in thirteen semi-annual consecutive equal installments from March 2017 to March 2023. The Series G Debentures aggregate principal amount is NIS 468 million as of December 31, 2019. The principal and interest amounts are denominated in NIS and are not linked to any index or to any other currency. We entered into hedging transactions to mitigate the foreign exchange rate differences on the principal and interest using a cross currency swap, see Note 10B to our consolidated financial statements for the year ended December 31, 2019. The Series G Debentures include customary financial and other terms and conditions, including a negative pledge and financial covenants. As of December 31, 2019, Tower was in compliance with the financial covenants under the Series G Debentures.

*NPB Co. / Wells Fargo Asset-Based Revolving Credit Line*

In December 2013, NPB Co. entered into an agreement with Wells Fargo Capital Finance, part of Wells Fargo & Company (“Wells Fargo”), for a five-year secured asset-based revolving credit line in the total amount of up to \$70 million, maturing in December 2018. In February 2018, NPB Co. and Wells Fargo signed an amendment to the credit line, under which the line was extended by five years, to mature in 2023, and the total amount remained at up to \$70 million (the “NPB Co. Credit Line Agreement”). The applicable interest on the loans is at a rate equal to, at lender’s option, either the lender’s prime rate plus a margin ranging from 0.0% to 0.5% or the LIBOR rate plus a margin ranging from 1.25% to 1.75% per annum.

The outstanding borrowing availability varies from time to time based on the levels of NPB Co.’s eligible accounts receivable, eligible equipment, eligible inventories and other terms and conditions described in the NPB Co. Credit Line Agreement. The obligations of NPB Co. under the NPB Co. Credit Line Agreement are secured by a security interest on all the assets of NPB Co. The NPB Co. Credit Line Agreement contains customary covenants and other terms, including customary events of default. If any event of default will occur, Wells Fargo may declare all borrowings under the facility due immediately and foreclose on the collateral. NPB Co.’s obligations pursuant to the NPB Co. Credit Line Agreement are not guaranteed by Tower or any of its affiliates.

As of December 31, 2019, NPB Co. was in compliance with all of the covenants under the NPB Co. Credit Line Agreement.

As of December 31, 2019, borrowing availability under the NPB Co. Credit Line Agreement was approximately \$70 million, of which approximately \$1 million was utilized through letters of credit.

As of December 31, 2019 and 2018, no loan amounts were outstanding under the NPB Co. Credit Line Agreement.

*Long Term Loan Agreement from Japanese Financial Institutions*

In June 2018, TPSCo refinanced its two then outstanding loan facilities with 11 Billion JPY (approximately \$100 million) new asset-based loan agreements with a consortia of financial institutions comprised of JA Mitsui Leasing, Ltd., Sumitomo Mitsui Trust Bank, Limited (SMTB), Sumitomo Mitsui Banking Corporation (SMBC) and China trust Commercial Bank Corporation (CTBC) (“JP Loan”). The JP Loan carries a fixed interest rate of 1.95% per annum, with principal payable in nine semiannual payments from 2021 until 2025. The JP Loan is secured mainly by a lien over the machinery and equipment of TPSCo located in Uozu and Tonami manufacturing facilities. Outstanding principal amount was approximately \$101 million as of December 31, 2019.

The JP Loan also contains certain financial ratios and covenants, as well as customary definitions of events of default and acceleration of the repayment schedule. TPSCo's obligations pursuant to the JP Loan are not guaranteed by Tower, Panasonic Corporation, PSCS or any of its affiliates.

As of December 31, 2019, TPSCo was in compliance with all of the financial ratios and covenants under the JP Loan.

### **C. RESEARCH AND DEVELOPMENT, PATENTS AND LICENSES**

Our research and development activities are related primarily to our manufacturing process by way of improvements, upgrades and development for our use in manufacturing of our customers' products and have been sponsored and funded by us with some participation by the Israeli government. Our research and development expenses for the years ended December 31, 2019, 2018 and 2017 were \$75.6 million, \$73.1 million and \$67.7 million, respectively, net of government participation of \$0.4 million, \$1.4 million and \$0.9 million respectively.

For a description of our research and development policies and our patents and licenses, see "Item 4. Information on the Company– B. Business Overview".

### **D. TREND INFORMATION**

We operate as a specialty foundry in the semiconductor industry. The semiconductor industry is historically characterized as highly cyclical, both seasonally and over the long term. Over time the market fluctuates, cycling through periods of weak demand, production excess capacity, excess inventory and price pressure, and periods of strong demand, full capacity utilization, and product shortages, commanding higher selling prices.

There is a trend within the semiconductor industry toward ever-smaller features and ever-growing wafer sizes. State-of-the-art digital fabs are currently supporting process geometries of 10-28 nanometers and even below with 300mm wafers. As demand for smaller geometries increases, there is downward pressure on the pricing of larger geometry products, and potential underutilization of fabs that are limited to manufacturing these larger geometry products, which may result in reduced profitability for the associated manufacturers. However, our strategy to focus on differentiated specialty analog technologies, along with our deep applications knowledge, design enablement tools and customer technical support, enable us to achieve higher product selling prices as compared to manufacturers of "commoditized" standard products. We currently offer process geometries of (i) 0.35, 0.50, 0.55, 0.60, 0.80-micron and above on 150-mm wafers; (ii) 0.35, 0.18, 0.16, 0.13 and 0.11-micron on 200-mm wafers; and (iii) 65 nanometer and 45 nanometer on 300-mm wafers. We continue to invest in our portfolio of specialty process technologies and Intellectual Property (IP) to address the key product and system requirements of our customers, enabling them to compete in their respective markets.

Another key element of our strategy is to target multiple large, growing and diversified end markets. We target end markets characterized by high growth and high performance, for which we believe our specialty process technologies and design services offer a strong, compelling value proposition to our customers. We focus on markets driven by three industry mega-trends: "Green Everything", "Wireless Everything", and "Smart Everything". Our target markets include the Internet of Things (IoT), machine-to-machine communication devices, ultra-low power mobile applications, wireless and high-speed wireline communications, consumer electronics, automotive, and industrial markets. For example, we believe that our specialty SOI and SiGe process technologies can provide performance and cost advantages over current GaAs solutions in the realization of switches and power amplifiers for wireless handsets. Our Power Management platforms enable the industry's analog IC suppliers to differentiate their product offerings in the markets we serve. Our specialized CMOS image sensor platforms allow customers to fabricate ultra high sensitivity/low noise CIS products for operation in visible, infra-red, ultra-violet and X-ray spectral ranges, develop both ultra small-size cameras and imagers occupying the whole surface of a 200mm wafer. We also target the rapidly growing non-visual sensor markets by developing specialized sensors some of them based on nanowire elements to be fabricated on silicon (SOI) and GaN technological platforms, in particular advanced integrated UV and gas sensors. We are also engaged in development of IPs for enabling data processing using artificial intelligence based on our original device approaches by using our patented memristor solutions for emulating synapses in artificial neural networks. Our specialty products and target market strategy allow us to grow and diversify our business by attracting new customers, expanding our customer base, and grow our business at existing customers.

During recent years, we have accelerated our plans to expand manufacturing capacity. We have significantly increased capacity in Fab 1, Fab 2, Fab 3, and acquired in 2014 3 additional fabs: Tonami CD, Arai & Uozu fabs located in Japan. In February 2016, we completed the acquisition from Maxim of an additional fab, Fab 9, located in San Antonio, Texas to help us meet our customers' demand. We are focused on successfully integrating all of our fabs globally and increasing the utilization of our fabs, by attracting new customers and opportunities.

We seek to maintain capital efficiency by leveraging our capacity and manufacturing model to ensure cost-effective manufacturing. With a global manufacturing footprint, including seven fabs in three continents, we are focused on sharing and applying best practices across the organization, to provide our customers with high quality solutions, along with the applications knowledge and technical support that allow them to benefit from a competitive edge in the market. Our geographical diversity allows us to perform an internal benchmark among our acquired facilities to gain knowledge on work processes and methodologies, thereby ensuring that we maintain a high level of operations across all facilities. Our global foothold also provides our customers with manufacturing flexibility and business continuity in terms of opportunity for capacity availability.

Over the last several years, we have been constantly looking to expand our presence in the global markets, penetrate new geographical areas, increase our served markets and expand our technology offering through business and development ventures. This may also be accomplished through the establishment of new facilities with third party collaboration and/or funding, mergers and acquisitions with potential target fabrication facilities that may include a solid base of customer demand, for the increase of our manufacturing capacity and/or development of technologies that may expand our servable and/ or available market potential, and increase our revenue, customer base and margins. Such transactions, mergers and acquisitions are also beneficial as they provide our customers with manufacturing diversification and opportunity for additional growth through access to increased capacity. We continuously evaluate potential acquisition opportunities. Our current cash balance, deposits and/or investments in marketable securities may be used to enable us to realize and execute on such opportunities, and we may require additional financing through, among other things, debt (including convertible debt, bonds, notes or debentures) and/or equity issuances (including shares and warrants), in order to consummate such opportunities and/ or fund our other operational and capital expenditure cash needs, as well as our M&A strategy to expand our global footprint, capacity and capabilities.

#### **E. OFF-BALANCE SHEET ARRANGEMENTS**

We are not a party to any material off-balance sheet arrangements except for the purchase commitments, standby letters of credit and guarantees detailed in the table set forth under Item 5F, "Tabular Disclosure of Contractual Obligations", below.

## E. TABULAR DISCLOSURE OF CONTRACTUAL OBLIGATIONS

The following table summarizes our contractual obligations and commercial commitments as of December 31, 2019:

	<b>Payment Due</b>						
	<b>Total</b>	<b>Less than 1 year</b>	<b>2 Years</b>	<b>3 Years</b>	<b>4 Years</b>	<b>5 Years</b>	<b>After 5 years</b>
	(in thousands of dollars)						
<b>Contractual Obligations</b>							
Short term liabilities (mainly trade accounts payable)	170,112	170,112	--	--	--	--	--
Loans, related interests and Capital leases	169,561	23,976	41,002	41,022	28,798	23,401	11,362
Debentures and related interest	127,331	39,183	36,865	34,703	16,580	--	--
Operating leases (1)	18,456	7,131	6,304	2,064	645	645	1,667
Equipment purchase agreements(2)	100,934	100,934	--	--	--	--	--
Other long-term liabilities	3,963	--	--	--	--	--	3,963
Other purchase obligations (3)	106,081	89,548	8,883	5,504	2,146	--	--
<b>Total contractual obligations</b>	<b>696,438</b>	<b>430,884</b>	<b>93,054</b>	<b>83,293</b>	<b>48,169</b>	<b>24,046</b>	<b>16,992</b>

1. Operating leases include (i) TPSCO's building and land lease commitment; (ii) Tower NPB's building lease commitment through 2022, which may be extended until 2027 upon the exercise of the option provided to Tower NPB (see Note 14D to the consolidated financial statements); and (iii) other company offices and car related operational lease commitments.
2. Equipment purchase agreements include amounts related to ordered equipment that has not yet been received.
3. Other purchase obligations include primarily purchase agreements for ordered raw materials that have not yet arrived.

In addition to the contractual obligations detailed above, we have committed approximately \$1.5 million in standby letters of credit and guarantees.

The above table does not include other contractual obligations or commitments we have, such as undertakings pursuant to royalty agreements, commissions and service agreements. We are unable to reasonably estimate the total amounts or the time table for such payments to be paid under the terms of these agreements, as the royalties, commissions and required services are a function of future revenues, the volume of business and hourly-based fees. In addition, the above table does not include our liability with respect to advances received from our customers, which as of December 31, 2019, amounted to approximately \$26.6 million that may be utilized by them against future purchases of products. We are unable to reasonably estimate the total amounts that may be utilized by our customers since we cannot reasonably estimate their future orders in the periods set forth in the above chart.

The table above reflects our commitments and contingencies that are known to us as of December 31, 2019. Any new developments in our business plans, our modification of engagements with supply and service providers as well as changes in our commitments and contingencies following the date hereof and actual payments may vary significantly from those presented above.

**ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES****A. DIRECTORS AND SENIOR MANAGEMENT**

Set forth below is information regarding our senior management and directors as of April 30, 2020:

<b>Officer</b>	<b>Senior Management Name</b>	<b>Age</b>	<b>Title(s)</b>
A	Russell C. Ellwanger	65	Chief Executive Officer and Director of Tower, and Chairman of the Board of Directors of its subsidiaries Tower Semiconductor USA, Inc., Tower US Holdings, Inc., Tower Semiconductor NPB Holdings, Inc., Tower Semiconductor Newport Beach, Inc., TowerJazz Panasonic Semiconductor Co., Ltd. and Tower Semiconductor San Antonio, Inc.
B	Oren Shirazi	50	Chief Financial Officer, Senior Vice President of Finance
C	Dr. Itzhak Edrei	60	President Emeritus(*)
D	Rafi Mor	56	Chief Operating Officer
E	Nati Somekh	45	Senior Vice President, Chief Legal Officer and Corporate Secretary
F	Yossi Netzer	56	Senior Vice President of Corporate Planning
G	Dalit Dahan	51	Senior Vice President of Human Resources and IT
H	Dr. Marco Racanelli	53	Newport Beach Site Manager and Senior Vice President and General Manager of Analog IC Business Unit
I	Guy Eristoff	57	Chief Marketing, Strategic Officer and Head of Pathfinder Activities
J	Dr. Avi Strum	58	Senior Vice President and General Manager of the CMOS Image Sensor Business Unit
K	Dani Ashkenazi	57	Senior Vice President and General Manager of Transfer, Optimization and Development Process Services Business Unit (TOPS)
L	Noit Levy	36	Vice President of Investor Relations and Corporate Communications
	<b>Directors Name(**)</b>	<b>Age</b>	<b>Title</b>
M	Amir Elstein	64	Chairman of the Board of Directors
N	Kalman Kaufman	74	Director
O	Alex Kornhauser	73	Director
P	Dana Gross	52	Director
Q	Ilan Flato	63	Director
R	Rami Guzman	81	Director
S	Yoav Z. Chelouche	66	Director
T	Iris Avner	55	Director

(\*) Dr. Itzhak Edrei served as the Company President until November 2019.

(\*\*) Russell Ellwanger also serves as a director; his information is included under Senior Management above.

**Russell C. Ellwanger** has served as our Chief Executive Officer since May 2005. Mr. Ellwanger has also served as a director since September 2016, and as Chairman of the Board of Directors of our subsidiaries, Tower Semiconductor USA, Inc., Tower US Holdings, Inc., Tower Semiconductor NPB Holdings, Inc., Tower Semiconductor Newport Beach, Inc., TowerJazz Panasonic Semiconductor Co., Ltd. and Tower Semiconductor San Antonio, Inc. Mr. Ellwanger also served as a director of Tower between May 2005 and April 2013. From 1998 to 2005, Mr. Ellwanger served in various executive positions for Applied Materials Corporation, including Group Vice President, General Manager of the Applied Global Services (AGS), from 2004 to 2005, Group Vice President, General Manager of the CMP and Electroplating Business Group, from 2002 to 2004. Mr. Ellwanger also served as Corporate Vice President, General Manager of the Metrology and Inspection Business Group, from 2000 to 2002, during which he was based in Israel. From 1998 to 2000, Mr. Ellwanger served as Vice President of Applied Materials' 300-mm Program Office, USA. Mr. Ellwanger served as General Manager of Applied Materials' Metal CVD Division from 1997 to 1998 and from 1996 to 1997, Mr. Ellwanger served as Managing Director of CVD Business Development, during which he was based in Singapore. In addition, Mr. Ellwanger held various managerial positions in Novellus System from 1992 to 1996 and in Philips Semiconductors from 1980 to 1992.

**Oren Shirazi** has served as our Chief Financial Officer and Senior VP Finance since November 2004. Mr. Shirazi serves as a board member of Tower Semiconductor Newport Beach, Inc. Mr. Shirazi joined us in October 1998, serving initially as vice controller and then as controller commencing in July 2000. Prior to joining us, Mr. Shirazi was employed as an audit manager in the accounting firm of Ratzkovski-Fried & Co., which merged into Ernst & Young (Israel). Mr. Shirazi is a Certified Public Accountant in Israel (CPA). Mr. Shirazi holds an MBA degree from the Graduate School of Business of Haifa University with honors and a B.A. degree in economics and accounting from the Haifa University.

**Dr. Itzhak Edrei.** has served as President Emeritus since November 2019 and as a member of the board of directors of TPSCo since 2014. From November 2011 until November 2019, Dr. Edrei served as our President. Prior thereto, Dr. Edrei served as Executive Vice President of Business Groups commencing in September 2008 and as Senior Vice President of Product Lines and Sales commencing in August 2005. Dr. Edrei served as a board member of Tower Semiconductor Newport Beach, Inc. and TowerJazz Panasonic Semiconductor Co., Ltd. From August 2001 to August 2005, Dr. Edrei served as Vice President of Research and Development, having served as Director of Research and Development since 1996. From 1994 to 1996, Dr. Edrei served as our Device and Yield Department Manager. Prior to joining Tower, Dr. Edrei was employed by National Semiconductor as Device Section Head. Dr. Edrei earned his Ph.D. in physics from Bar Ilan University and his post-doctorate from Rutgers University.

**Rafi Mor** has served as Chief Operating Officer of Tower since August 2014. Mr. Mor serves as a board member of Tower Semiconductor Newport Beach, Inc., Tower Semiconductor NPB Holdings, Inc., TowerJazz Panasonic Semiconductor Co., Ltd. and Tower Semiconductor San Antonio, Inc. Mr. Mor served as Chief Executive Officer of TowerJazz Japan from October 2011 until August 2014, after serving as Senior Vice President and General Manager of Tower Semiconductor Newport Beach, Inc. from September 2008. In October 2010, Rafi was nominated to be the manager of our Newport Beach Fab, in addition to his General Manager role. Prior thereto, Mr. Mor served in Tower Semiconductor Ltd. as Vice President of Business Development from April 2007, after serving as Vice President and Fab 2 Manager from August 2005, and as Fab 1 Manager from March 2003. From November 2000 to March 2003, Mr. Mor served as Senior Director of Process Device & Yield of Fab 1. From 1998 to 2000, Mr. Mor served as Director of Equipment Reliability & Support of Fab 1. Previously, Mr. Mor was employed by National Semiconductor in various engineering and management capacities. Mr. Mor holds M.A. and B.A. degrees in chemical engineering from Ben Gurion University.

**Nati Somekh** has served as Senior Vice President, Chief Legal Officer and Corporate Secretary since February 2010, after serving as Vice President, Chief Legal Officer and Corporate Secretary from September 2008, after serving as Corporate Secretary and General Counsel from March 2005, and as Associate General Counsel from May 2004. From 2001 to 2004, Ms. Somekh was employed by Goldsobel & Kirshen, Adv. Ms. Somekh holds an LL.M. and J.D. degrees from Boston University and a B.A. degree from Johns Hopkins University. Ms. Somekh is a member of the Israel Bar Association and is admitted as an attorney in the State of New York.

**Yossi Netzer** has served as Senior Vice President of Corporate Planning since July 2012, after serving as VP of Corporate Planning from November 2008, as General Manager of Mixed Signal, RF & Power Management Product Line from 2005 and as Director, FAB 2 Yield & Device Engineering Manager from 2000. From 1995 to 2000, Mr. Netzer served in various engineering management positions within the R&D division dealing with CMOS, Mixed Signal, RF, and NVM Technologies. Prior to joining Tower, Mr. Netzer was employed at National Semiconductor and the Technion – Israel Institute of Technology. Mr. Netzer holds a B.Sc. degree in electrical engineering from the Technion – Israel Institute of Technology

**Dalit Dahan** has served as Senior Vice President of Human Resources and IT since 2008. Prior thereto, Ms. Dahan served as Vice President of Human Resources commencing in April 2004. Ms. Dahan joined us in November 1993 and served as Personnel Manager commencing in April 2000, after having served as Compensation & Benefits Manager and in various other positions in the Human Resources Department. Prior to joining us, Ms. Dahan served as Manager of the North Branch of O.R.S - Manpower Company for three years. Ms. Dahan holds a B.A. degree in social science from Haifa University and an MBA degree from the University of Derby.

**Dr. Marco Racanelli** has served as Senior Vice President and General Manager of the Analog Integrated Circuits (IC) Business Unit since December 2018 and also serves as the Newport Beach Site Manager since April 2014. Previously, Dr. Racanelli served as Senior Vice President from June 2012 and General Manager, RF & High Performance Analog Business Group and Aerospace & Defense Group from September 2008. Prior to that, Dr. Racanelli served as Vice President of Technology & Engineering, and Aerospace & Defense General Manager for Jazz Semiconductor. Prior to Jazz, Dr. Racanelli held several positions at Conexant Systems and Rockwell Semiconductor since 1996 in the area of technology development where he helped establish industry leadership in SiGe and BiCMOS and MEMS technology, and built a strong design support organization. Prior to Rockwell, Dr. Racanelli worked at Motorola, Inc., where he contributed to bipolar, SiGe and SOI development for its Semiconductor Products Sector. Dr. Racanelli holds a Ph.D. and a M.Sc. degree in Electrical and Computer Engineering from Carnegie Mellon University, and a B.Sc. in Electrical Engineering from Lehigh University. Dr. Racanelli holds over 35 U.S. patents.

**Guy Eristoff** has served as Chief Marketing, Strategic Officer and Head of Pathfinder Activities since December 2019, and also serves as a member of the board of directors of TPSCo since April 2014. Previously, Mr. Eristoff served as TPSCo's Chief Executive Officer from its foundation in April 2014 until December 2019. Previously, Mr. Eristoff served as Vice President, Global Operational Excellence at Tower Semiconductor Ltd. Prior to that, Mr. Eristoff served in various positions in the semiconductor industry such as Director of 200mm Fabs Core Engineering at Global-Foundries (Technology Development, Marketing, Industrial Engineering & Central Engineering) for the 200mm Business Unit, (5 fabs), General Manager, Singapore and Asia Region at Intevac, Thin Films Section Manager, Thin Films Module Manager and Process Integration Deputy Director at Chartered Semiconductor and Process/Hardware Engineer and Field Service Manager at Applied Materials. Mr. Eristoff received his B.S. degree in Physics from Rensselaer Polytechnic Institute, (RPI) Troy New York.

**Dr. Avi Strum** has served as our Senior Vice President and General Manager of the CMOS Image Sensor Business Unit since 2018, and also serves as a member of the board of directors of TPSCo since 2019. Previously, Dr. Strum served as Vice President and General Manager of the Specialty Business Unit, Vice President of Europe Sales, Head of the Design Center in Netanya and Device and Integration Department Manager. Prior to joining Tower, Dr. Strum served as the President and COO of TransChip Inc. and from 1996 to 2001, he served in various positions with Intel Corp., both in Israel and the US. From 1990 to 1996, he was the R&D Manager of SCD and was in charge of all the Infrared Detectors development in SCD. Dr. Strum received his Ph.D. and B.Sc. degree in Electrical Engineering from the Technion - Israel Institute of Technology.

**Dani Ashkenazi** has served as Senior Vice President and General Manager of Transfer, Optimization and Development Process Services Business Unit (TOPS) and Europe Sales since June 2019. Previously, Mr. Ashkenazi served as Vice President of Worldwide Customer Solutions from 2015. Mr. Ashkenazi served as Vice President of Sales for APAC & Israel from 2008, after serving as General Manager, CMOS Product Line from 2005 and as Director of Customer Support, and Director of Reliability from 2003. Prior to that, Mr. Ashkenazi served as Application Manager at Tower USA in Santa Clara and prior to that Mr. Ashkenazi held engineering management positions within the process, test and product engineering groups. Mr. Ashkenazi holds M.Sc. and B.Sc. degrees in Physics from the Hebrew University of Jerusalem.

**Noit Levy** has served as our Vice President of Investor Relations and Corporate Communications and is heading our investor relations, public relations and marketing communications since 2008, having served as Director of Investor Relations and Public Relations since 2006. From 2001 to 2006 she has served in various other positions within the Company. Ms. Levy holds an MBA from Haifa University in Israel and a B.A. in Social Science and Management from the College of Management Academic Studies.

**Amir Elstein** has served as the Chairman of our Board of Directors since January 2009. Mr. Elstein serves as a Director of Teva Pharmaceutical Industries Ltd. During 2010-2013, Mr. Elstein served as Chairman of the Board of Directors of Israel Corporation. Mr. Elstein serves as Chairman of the Israel Democracy Institute, and as chairman/member of the board of several non-governmental organizations in academic, scientific and educational, social and cultural institutions. Mr. Elstein was a member of Teva Pharmaceutical Industries senior management team from 2005 to 2008, where he ultimately held the position of the Executive Vice President at the Office of the Chief Executive Officer, overseeing Global Pharmaceutical Resources. Prior thereto, Mr. Elstein was an executive at Intel Corporation, where he worked for 23 years, eventually serving as General Manager of Intel Electronics Ltd., an Israeli subsidiary of Intel. Mr. Elstein received a B.Sc. degree in physics and mathematics from the Hebrew University of Jerusalem and M.Sc. degree in the Solid State Physics Department of Applied Physics from the Hebrew University in 1982. In 1992, Mr. Elstein received his diploma of Senior Business Management from the Hebrew University of Jerusalem.

**Kalman Kaufman** has served as a director since 2005 and as chairman of the Nomination Committee since January 2018. Mr. Kaufman served as Corporate Vice President at Applied Materials from 1994 to 2005. Between 1985 and 1994, Mr. Kaufman served as President of KLA Instruments Israel, a company he founded, and General Manager of Kulicke and Soffa Israel. Mr. Kaufman is currently the Chairman of the board of directors of Medasense and Invisia, a director at ATP labs and a member of the management board of the Kinneret College. Mr. Kalman holds engineering degrees from the Technion - Israel Institute of Technology.

**Alex Kornhauser** has served as a director since August 2008 (until November 2016 as an external director, within the meaning of the Companies Law). Previously, Mr. Kornhauser served as a member of the Compensation Committee from June 2009 until October 2019. From 2017, Mr. Kornhauser serves as a board member at Priortech. From 2008 until 2010, Mr. Kornhauser served as Senior VP and General Manager of Global Operations at Numonyx Corporation. From 1978 until 2008, Mr. Kornhauser held many senior management positions at Intel Corporation and Intel Israel serving as General Manager of Intel Israel, General Manager of Intel Electronics, VP of Technology and Manufacturing Group and President of Intel Israel. Mr. Kornhauser holds a B.Sc. degree in electronics from Bucharest Polytechnic Institute in Romania.

**Dana Gross** has served as a director since November 2008, as a member of the Nomination Committee since January 2018 and as a member of the Compensation Committee since February 2013. In addition, Mrs. Gross has served as a director on the board of Tower Semiconductor Newport Beach, Inc., our wholly owned subsidiary, since March 2009. Mrs. Gross is currently the COO of Prospera Technologies Ltd., an AgTech Data Company. Mrs. Gross was the CFO of eToro, a FinTech company that developed a Social Investment network from 2014 to 2016, and the CEO of Btendo, a start-up company that developed MEMS based PICO projection solutions, until it was acquired by ST Microelectronics in 2012. Mrs. Gross was a Venture Partner at Viola Ventures, a leading Israeli venture capital firm as a Venture Partner, from 2018 until 2010. From 2006 to 2008, Mrs. Gross was a Senior VP, Israel Country Manager at SanDisk Corporation. From 1992 to 2006, Mrs. Gross held various senior positions at M-Systems, including Chief Marketing Officer, VP World Wide Sales, President of M-Systems Inc. (US Subsidiary) and CFO, VP Finance and Administration. In addition, Mrs. Gross served as a director of M-Systems Ltd., Audiocodes Ltd. and Power Dsine Ltd. Mrs. Gross holds a B.Sc. degree in industrial engineering from Tel-Aviv University and an M.A. degree in business administration from San Jose State University.

**Ilan Flato** has served as a director since February 2009 (until November 2016 as an external director, within the meaning of the Companies Law). Mr. Flato served as chairman of the Compensation Committee from February 2013 until October 2019 and since such time continues to serve as a member of the Compensation Committee. Mr. Flato has served as a member of the Audit Committee since April 2009. Mr. Flato is classified by the Board of Directors as an audit committee financial expert under applicable SEC rules. Mr. Flato has served as President of The Association of Publicly Traded Companies on the Tel-Aviv Stock Exchange since January 2012. Since 2011, Mr. Flato has been a member of the Israel Bar Association. From 2009 until 2018, Mr. Flato served as a director in two Provident Funds. From 2009 until April 2018, Mr. Flato served as Chairman of the Business Executive of Kibbutz Kfar Blum. Since January 2018, Mr. Flato serves as Chairman of the Business Executive Kibbutz "NAAN". Since 2004, Mr. Flato has functioned as an independent financial adviser. Until 2004, Mr. Flato served as the VP for planning, economics and online banking in United Mizrahi Bank and as the Chief Economist of the bank. From 1992 until 1996, Mr. Flato served as the Economic Advisor to the Prime Minister of Israel. Prior to that position, Mr. Flato served in the Treasury Office as the deputy director of the budget department. In addition, Mr. Flato served as a member of the board of directors of many government-owned companies. Mr. Flato holds a B.A. degree in economics from Tel-Aviv University, an LL.B. degree from Netanya College, an LL.M. degree from Bar-Ilan University and an MSIT from Clark University.

**Rami Guzman** has served as a director since February 2009, as chairman and member of the Compensation Committee since October 2019, as a member of the Nomination Committee since January 2018, and as a member of our Audit Committee since August 2011. Mr. Guzman is classified by the Board of Directors as an audit committee financial expert under applicable SEC rules. Mr. Guzman has held various senior positions at Motorola Inc. and Motorola Israel Ltd. since 1985, including VP of Motorola Inc. and Director of Motorola Israel Ltd. In addition, until July 2004, Mr. Guzman was the CFO of Motorola Israel Ltd. Prior to joining Motorola, Mr. Guzman worked for the Ministry of Finance, first as senior assistant and deputy to the Director of the Budget and then as Government-wide MIS and IT Commissioner. Mr. Guzman is a member of professional committees in the Israel Credit Insurance Company and the Israel Infrastructure Fund, and consultant and advisor to technology-based companies. Since 2017, Mr. Guzman serves as the Chairman of the board of directors of Tigbur. Mr. Guzman also serves since 2005 as a director in various entities, including serving as a director in Bank Leumi until October 2015. Mr. Guzman holds a B.A. degree in economics and an M.A. degree in business and public administration from the Hebrew University of Jerusalem. Mr. Guzman was a Research Fellow at Stanford University and Stanford Research Institute, California, USA, and completed Ph.D. studies at the Hebrew University of Jerusalem.

**Yoav Z. Chelouche** has served as a director since April 2016, as a member of the Nomination Committee since January 2018, and as a chairman and member of our Audit Committee since May 2017. Mr. Chelouche is classified by the Board of Directors as an audit committee financial expert under applicable SEC rules. Mr. Chelouche serves as Managing Partner of Aviv Ventures since Aviv's inception in 2001. Between 1995 and 2001, Mr. Chelouche served as President & CEO of Scitex Corp. Until 2015, Mr. Chelouche was co-chairman of Israel Advanced Technology Industries. Mr. Chelouche currently serves on the Board of Directors of Checkpoint Software Technologies and the Tel-Aviv Stock Exchange. Mr. Chelouche is currently a board member of Aviv's portfolio companies: MGVS, Briefcam, ScaleMP and Optimal Test. Mr. Chelouche also previously served as Chairman of several public companies. Mr. Chelouche holds a B.A. degree in economics and statistics from Tel Aviv University and an MBA degree from INSEAD, Fontainebleau, France.

**Iris Avner** has served as a director since June 2016 (until November 2016 as an external director, within the meaning of the Companies Law), and has served as a member of the Audit Committee since June 2016. Ms. Avner served as a member of the Compensation Committee from June 2016 until October 2019. Ms. Avner is classified by the Board of Directors as an audit committee financial expert under applicable SEC rules. Ms. Avner serves as Chief Executive Officer of Nika Holdings, Ltd. From 2008 to 2015, Ms. Avner served as Managing Partner of Mustang Mezzanine Fund, L.P. and served on Mustang's board of directors from 2014 until 2015. From 1996 until 2008, Ms. Avner served as Chief Executive Officer of Mizrahi Tefahot Capital Markets Ltd. and from 1996 until 2005, served as Senior Credit Officer & Deputy CEO of Mizrahi Tefahot Bank. In addition, from 1997 until 2002, Ms. Avner served as Assistant Professor and external lecturer in the Executive MBA Program in Tel Aviv University. From 1988 until 1996, Ms. Avner held various positions at Israeli Discount Bank including Senior Credit Officer and Senior Economist. Ms. Avner has served as a member of the board of directors of Israel Discount Bank since March 2018 and Amir Marketing and Investments in Agriculture since May 2017. Ms. Avner has served as a member of the board of directors of Rotshtein Real Estate since August 2016 and served as a member of the board of directors of Brand Industries from August 2016 until August 2019. Ms. Avner previously served on several boards and board committees in Israel and abroad, both as director and chairperson. Ms. Avner holds a B.A. degree in accounting and economics from the Hebrew University of Jerusalem and an MBA degree from Tel Aviv University.

Mr. Jerry Neal, who served as a director from July 2018 and as a member of the Compensation Committee from October 2019, ceased to serve in such positions as of April 18, 2020.

We are not party to, and are not aware of, any arrangements or understandings with major shareholders, customers, suppliers or others, pursuant to which any director or executive officer was selected as a director or member of senior management, as the case may be.

## **B. COMPENSATION**

Under the Companies Law, a public company must have a policy regarding the terms of engagement of office holders, as such term is defined in the Companies Law, to which we refer to as a compensation policy. The compensation policy must be approved at least once every three years, first, by our board of directors, upon recommendation of our compensation committee, and second, by the shareholders by the Special Majority (as defined in Item 6C under "— Disclosure of Personal Interests of an Office Holder and Approval of Certain Transactions—*Approval of Director and Officer Compensation—Executive Officers other than the Chief Executive Officer*"). Under special circumstances, the board of directors may approve the compensation policy despite the objection of the shareholders on the condition that the compensation committee and then the board of directors decide, on the basis of detailed grounds and after discussing again the compensation policy, that approval of the compensation policy, despite the objection of shareholders, is for the benefit of the company.

Our amended and restated Compensation Policy for Executive Officers and Directors, which was approved by our shareholders on June 29, 2017, serves as the basis for decisions concerning the financial terms of employment or engagement of our office holders, including compensation, equity-based awards, indemnification and insurance, severance and other benefits. Our compensation policy is performance based and is designed to align our officers' and directors' interests with those of the Company and its shareholders in order to enhance shareholder value. Our compensation policy allows us to provide incentives that reflect short-term, mid-term and long-term goals and performance, as well as motivate achievement of company targets, while providing compensation that is competitive in the global marketplace in which we recruit our senior management.

As an Israeli company with a significant global footprint, we aim to adopt compensation policies and procedures that match global companies of similar complexity, including semiconductor companies and other companies which compete with us for similar talent.

Under the Companies Law, a company's compensation policy must be determined and later reevaluated according to certain factors, including: the advancement of the company's objectives, business plan and long-term strategy; the creation of appropriate incentives for office holders, while considering, among other things, the company's risk management policy; the size and the nature of the company's operations; and with respect to variable compensation, the contribution of the office holder towards the achievement of the company's long-term goals and the maximization of its profits, all with a long-term objective and according to the position of the office holder. The compensation policy must furthermore consider the following additional factors:

- the education, skills, expertise and achievements of the relevant office holder;
- the role and responsibilities of the office holder, and prior compensation arrangements with the office holder;
- the ratio of the cost of the offered terms to the cost of compensation of the other employees of the company (including any employees employed through manpower companies), specifically to the cost of the average and median salaries of such employees and the impact of the disparities between them upon work relationships in the company;
- with respect to variable compensation, the possibility of reducing variable compensation at the discretion of the board of directors, and the possibility of setting a limit on the exercise value of non-cash variable equity-based compensation; and
- with respect to severance compensation, the period of employment or service of the office holder, the terms of his or her compensation during such period, the company's performance during such period, the person's contribution towards the company's achievement of its goals and the maximization of its profits, and the circumstances under which the person is leaving the company.

In addition, the compensation policy must also include the following features: (i) with respect to variable components of the compensation of the chief executive officer or any officer who is not subordinate to the chief executive officer - determining the variable compensation on long term performance and measurable criteria; however, an immaterial portion of the variable components of the chief executive officer or any officer who is not subordinate to the chief executive officer can be discretion based awards, if such amount is not higher than three monthly salaries per annum, taking into account the contribution of the officer to the company; (ii) the ratio of variable components and fixed components and a cap on variable components at the time of their payment, except that the cap for equity-based compensation is determined at the time of grant; (iii) the conditions under which an office holder would be required to return compensation paid, in the event that it is later revealed that such amounts were paid on the basis of data that was inaccurate and was required to be restated in the company's financial statements; (iv) the minimum holding or vesting periods for equity-based variable components of compensation, while taking into consideration long term incentives; and (v) maximum limits on grants or benefits paid upon termination.

Compensation under our compensation policy may include: base salary; benefits and perquisites, performance-based cash bonuses and other bonuses (such as special bonuses for substantial achievements and sign-on bonuses); equity-based compensation; and retirement, termination and other arrangements. Our compensation policy aims to optimize the mix of fixed compensation and variable compensation in order to, among other things, appropriately incentivize office holders to meet our goals while considering our management of business risks, and sets maximum ratios between the two types of compensation elements.

All compensation arrangements of officers and directors are required to be approved in the manner prescribed by applicable law (see details in Exhibit 2.1 to this annual report).

For the year ended December 31, 2019, we paid to all our directors and senior management described in Item 6A above, as a group, an aggregate of \$7.1 million in salaries, fees, payments upon termination and bonuses (excluding employer cost and equity-based compensation, which are detailed below). The total employer cost for personal vehicles, relocation related expenses, amounts set aside or accrued to provide for insurance, severance, retirement, vacation and similar benefits or expenses for such persons was approximately \$2.4 million for the year ended December 31, 2019.

The following is a summary of the compensation paid or granted to our five most highly compensated officers and/or directors for the year ended December 31, 2019 (collectively referred to herein as the "Covered Officers"). The Covered Officers consist of the individuals listed in A, B, D, I and H in the table set forth in Item 6A above. All amounts reported reflect the cost to the Company as recognized in our financial statements for the year ended December 31, 2019.

The base salary of our executive officers is individually determined according to past performance, educational background, country of residence, professional experience, qualifications, specializations, role, business responsibilities, achievements of the officer and prior salary and compensation arrangements, as well as comparative peer group analyses. Base salary (gross) paid to the Covered Officers A, B, D, I and H for the year ended December 31, 2019, amounted to \$0.78 million, \$0.33 million, \$0.31 million, \$0.23 million and \$0.39 million, respectively. Executive officers are entitled to social and other benefits in accordance with applicable law, our policies and common practice. The cost of social and other benefits awarded to the Covered Officers A, B, D, I and H for the year ended December 31, 2019, amounted to \$0.17 million, \$0.18 million, \$0.17 million, \$0.08 million, and \$0.09 million, respectively. In addition, relocation and related reimbursement expenses awarded to Covered Officer A for the year ended December 31, 2019, amounted to \$0.28 million. Covered Officer I, who served as the Chief Executive Officer of TPSCO in Japan from 2014 to 2019, was entitled to reimbursement expenses in relation to his relocation to Japan, and the Company also made payments to him and for his benefit, including to certain Japanese and other governmental agencies, compensating him for added costs resulting from his relocation. Such relocation related payments, including cost accrual to the Company in respect to Covered Officer I, for the year ended December 31, 2019, amounted to \$0.53 million. No relocation related payments or accruals were made to any of Covered Officers B, D and H.

Our policy is to award annual cash bonuses to executive officers, subject to the attainment of pre-determined annual measurable objectives, which are set in the first quarter of each year, and personal performance evaluation. In accordance with our compensation policy, the pre-defined annual bonus plans include measurable components and the weight (in percentage terms) of each measure as a portion of the annual criteria, as well as a minimum threshold below which no annual bonus will be awarded, and a portion of the annual bonus is based on performance valuation, in accordance with our compensation policy and subject to applicable law. The cash bonus gross amounts paid by the Company to the Covered Officers A, B, D, I and H for the year ended December 31, 2019, amounted to \$0.66 million, \$0.21 million, \$0.19 million, \$0.14 million and \$0.14 million, respectively.

Equity based compensation for directors and officers is intended to be in the form of restricted stock units (“RSUs”), options and/or other equity forms, in accordance with our equity-based compensation policies and programs in place from time to time and in accordance with our compensation policy. Equity-based compensation may be granted as an annual grant and/or from time to time, and is individually determined. Generally, equity-awards shall not begin to vest before the end of the first year from the date of grant. We calculate the fair market value of equity-based compensation for officers and directors at the time of grant according to the Black-Scholes model, binomial model or any other best practice or commonly accepted equity-based compensation valuation model, when such award is duly approved in accordance with applicable law, and amortize such value over the applicable vesting schedule. Total value of equity based compensation to the Covered Officers A, B, D, I and H recorded for the year ended December 31, 2019 (calculated based on the total amortization cost recorded in the Company’s statement of operations for the year ended December 31, 2019 with respect to all equity-based grants to the Covered Officers), amounted to \$3.54 million, \$0.81 million, \$0.73 million, \$0.34 million and \$0.56 million, respectively.

Under our compensation policy, we may grant our executive officers certain termination and retirement payments, including a change of control bonus, subject to the termination of employment of such officer upon a change of control and subject to receipt of applicable corporate approvals as required by law. In accordance with our compensation policy, upon termination of employment, including upon a change of control, our chief executive officer would be eligible for a payment of twelve monthly base salaries without benefits, and in the event of a change of control, he would also be entitled to acceleration of all unvested equity. In addition, under our compensation policy, upon a change of control, all other executive officers may be entitled to a payment in the amount of up to nine months’ base salary and acceleration of all unvested equity, and the chairman of the board of directors and other directors may be entitled to acceleration of all unvested equity. No such payment or accrual was made or earned in 2019.

At our 2019 annual general meeting held on June 25 2019, our shareholders approved an equity grant to our Chief Executive Officer in the value of \$3.9 million, 50% of which is time-vested RSUs and 50% of which is performance-based RSUs, both vesting over a three-year period. The performance based RSUs were set to be earned by the CEO in proportion to the attainment by the Company of two financial corporate performance metrics, net profit and cash from operations for 2019, weighted equally. Actual net profit for 2019 was \$90.0 and cash from operations for 2019 was \$291.3 million. Since our financial results were lower than these 2019 metrics, the Chief Executive Officer earned a proportional portion of the performance-based RSUs. For further details, see our proxy statement for the 2019 annual general meeting of shareholders, filed with the SEC on Form 6-K on May 16, 2019.

Following the approval of our shareholders at the 2019 annual general meeting and consistent with our compensation policy, we pay each of our directors (other than our chief executive officer who also serves as a director, whose compensation is detailed above, and the chairman of our Board of Directors): (i) an annual fee of approximately \$40,000; and (ii) per meeting fees of approximately \$1,000, as well as reimbursement for reasonable travel and other expenses in accordance with our policies. In addition, our shareholders approved the payment to the Chairman of our Board of Directors of an annual cash fee of \$300,000 (paid in monthly installments) and the award of time-vested RSUs in a value of \$300,000, which vest in three equal installments on each of the three anniversaries of the date of grant. Furthermore, our shareholders approved the award to each of our directors (other than our chief executive officer and the chairman of our Board of Directors, whose compensation is detailed above) time-vested RSUs in a value of \$75,000, which vest over a two-year period, with 50% vesting at the end of each of the two anniversaries of the date of grant. In the event any such director’s service is terminated for any reason, including by way of resignation, prior to the second anniversary of the date of grant, (i) if such director has served on the board of directors for five years or more, all unvested RSUs shall be accelerated; and (ii) if such director has served on the board of directors for less than five years, 50% of all unvested RSUs shall be accelerated.

We have entered into exemption and indemnification agreements with each of our officers and directors, pursuant to which, subject to the limitations set forth in the Companies Law, the Israeli Securities Law, 1968 and our articles of association, they will be exempt from liability for breaches of the duty of care and we agreed to indemnify them for certain costs, expenses and liabilities with respect to events specified in such agreements. In addition, our officers and directors are currently covered by a directors' and officers' liability insurance policy.

### **Equity Incentive Plans**

In 2013, the Company adopted a share incentive plan for its directors, officers, employees and its subsidiaries' employees (the "2013 Plan"). In accordance with our compensation policy, equity-based compensation awarded by the Company shall not exceed 10% of the fully-diluted share capital of the Company, as calculated at the time of grant (which fully-diluted share capital will be calculated pro-forma after taking into account the proposed grants and shares underlying all outstanding equity-based awards).

As of December 31, 2019, approximately 1.17 million options and RSUs outstanding under the 2013 Plan were awarded to our directors and senior management detailed in Item 6A, of which approximately 0.49 million were awarded to our chief executive officer and approximately 0.03 million were awarded to the chairman of our Board of Directors.

In June 2019, pursuant to the approval of our shareholders at the 2019 annual general meeting, we granted the following equity awards to the chief executive officer, Chairman of the board of directors and other directors under the 2013 Plan: (i) 128,797 time-vested RSUs and 128,798 performance-based RSUs to the chief executive officer, as detailed above, for a total compensation value of approximately \$3.9 million; (ii) 19,815 time-vested RSUs to the chairman of the board of directors, as detailed above, for a total compensation value of approximately \$0.3 million; and (iii) 4,953 time-vested RSUs to each of our eight directors (excluding the Chairman and the chief executive officer), as detailed above, for a total compensation value of approximately \$0.6 million. In addition, in 2019, we granted an aggregate of approximately 0.18 million time-based RSUs and approximately 0.18 million performance-based RSUs to our senior management described in Item 6A (excluding the chief executive officer) under the 2013 Plan, vesting over a three-year period, for a total compensation value of approximately \$6.3 million.

For further information concerning our employee equity plans and outstanding employee equity, see Note 15B to the consolidated financial statements included in this annual report.

## **C. BOARD PRACTICES**

### ***Board of Directors***

Our Articles of Association provide that the Board of Directors shall consist of at least five and no more than 11 members. Our Board of Directors is currently comprised of ten directors. Our directors are elected by the general meeting of our shareholders by the vote of a majority of the ordinary shares present, in person or by proxy, and voting at that meeting. Generally, our directors hold office until their successors are elected at the next annual general meeting of shareholders (or until any of their earlier resignation or removal in accordance with the Companies Law). In addition, our Articles of Association allow our board of directors to appoint directors (other than the external directors) to fill vacancies on our board of directors, until the next annual general meeting of shareholders.

### ***Alternate Directors***

Our Articles of Association provide that any director may, subject to the approval of the Board of Directors, appoint another person to serve as an alternate director, and may cancel such appointment, by delivering written notice to the alternate director and to the Company. Any person who is qualified to serve as a director, and who is not already serving as a director or an alternate director, may act as an alternate director, and the same person may not act as the alternate for more than one director at a time. An alternate director has the same rights and responsibilities as a director, and the appointment of an alternate director does not relieve the appointing director from his/her responsibilities as a director. The term of appointment of an alternate director may be for one meeting of the Board of Directors or for a specified period or until notice is given of the cancellation of the appointment or until the director who appointed the alternate ceases to serve as a director of the Company.

### ***External Directors***

The Companies Law requires Israeli companies with shares that have been offered to the public in or outside of Israel to appoint no less than two external directors. However, pursuant to the Companies Regulations (Relief for Companies Whose Shares are Registered for Trading Outside of Israel) – 2000 (the “Relief Regulations”), an Israeli public company may elect to exempt itself from the requirement to appoint external directors if it meets all of the following conditions:

- The company’s shares are listed on certain foreign stock exchanges listed in the Relief Regulations, which include the NASDAQ Global Select Market;
- The company does not have a controlling shareholder; and
- The company complies with the requirements of the securities laws and stock exchange regulations in the foreign jurisdiction where its shares are listed relating to appointment of independent directors and composition of audit and compensation committees as applicable to companies that are incorporated under the laws of such foreign jurisdiction.

Pursuant to the Relief Regulations, Israeli public companies that meet the above conditions may opt to comply with the applicable rules in the foreign jurisdiction governing the appointment of independent directors and composition of audit and compensation committees as applicable to domestic issuers in the foreign jurisdiction (which with respect to the Company are the Nasdaq Listing Rules and the rules under the Securities Exchange Act of 1934 (the “Exchange Act”)) instead of complying with the Companies Law provisions relating to (i) the appointment of external directors; (ii) certain limitations on the employment or service of an outside director or his or her spouse, children or other relatives, following the cessation of the service as an outside director, by or for the company, its controlling shareholder or an entity controlled by the controlling shareholder; (iii) the composition, meetings and quorum of the audit committee; and (iv) the composition and meetings of the compensation committee. If a company has elected to avail itself from the requirement to appoint external directors and at the time a director is appointed all members of the board of directors are of the same gender, a director of the other gender must be appointed.

Following analysis of our qualification to rely on the exemption, in September 2016, our Board of Directors determined to adopt the exemption, effective as of November 1, 2016. If in the future we were to have a controlling shareholder, we would again be required to comply with the requirements relating to external directors and the composition of the audit committee and compensation committee under Israeli law.

### ***Director Independence***

In accordance with exemptions from the Israeli law requirements to have external directors serving on our Board of Directors, we comply with the director independence requirements and the audit committee and the compensation committee composition requirements under U.S. laws (including applicable Nasdaq Capital Market rules) applicable to U.S. domestic issuers. Under the Nasdaq Listing Rules, a majority of the board of directors must be comprised of independent directors (as defined in the Nasdaq Listing Rules). Our board of directors has made a determination of independence under the Nasdaq Listing Rules with respect to all directors, other than Mr. Ellwanger, our Chief Executive Officer, and Mr. Amir Elstein, the Chairman of our board of directors.

## *Audit Committee*

Our audit committee currently consists of Mr. Yoav Chelouche, Mr. Ilan Flato, Mr. Rami Guzman and Mrs. Iris Avner. Mr. Yoav Chelouche serves as the audit committee chairman.

### *Composition requirements*

The Companies Law requires public companies to appoint an audit committee; however, following the Company's determination to follow the relief provided under the Relief Regulations, as described above, the composition of our audit committee is governed by the rules set forth in the Nasdaq Listing Rules and the Exchange Act.

Under the Nasdaq corporate governance rules, we are required to maintain an audit committee consisting of at least three independent directors (within the meaning of the Exchange Act and Nasdaq Listing Rules), each of whom must meet certain requirements for financial literacy and one of whom has accounting or related financial management expertise, and none of whom has participated in the preparation of our or any of our subsidiaries financial statements at any time during the prior three years.

The Board of Directors has determined that all of the members of the audit committee meet the independence and financial knowledge requirements for audit committee service of the Nasdaq Listing Rules and the Exchange Act, as well as the Nasdaq Listing Rules requirement regarding financial sophistication. In addition, our Board of Directors has determined that each member of our audit committee is an audit committee financial expert pursuant to the applicable SEC rules.

### *Audit Committee role*

Our board of directors has adopted an audit committee charter setting forth the responsibilities of the audit committee consistent with the Companies Law, the SEC rules and the Nasdaq Listing Rules, which include:

- retaining and terminating our independent auditors, subject to the ratification of the board of directors, and in the case of retention, to that of the shareholders, as applicable in accordance with the Companies Law;
- pre-approving of audit and non-audit services and related fees and terms, to be provided by the independent auditors;
- overseeing the accounting and financial reporting processes of our company and audits of our financial statements, the effectiveness of our internal control over financial reporting and making such reports as may be required of an audit committee under the rules and regulations promulgated under the Exchange Act;
- reviewing with management and our independent auditor our annual and quarterly financial statements prior to publication or filing (or submission, as the case may be);
- recommending to the board of directors the retention and termination of the internal auditor, and the internal auditor's engagement fees and terms, in accordance with the Companies Law as well as approving the yearly or multi-year plan proposed by the internal auditor, and review the results and findings of internal audits;
- overseeing Company risk assessment and reviewing regulatory compliance;

- determining whether to approve certain related party transactions (including transactions in which an office holder has a personal interest) and whether any such transaction is extraordinary or material under Companies Law;
- determining whether a competitive process must be implemented for the approval of certain transactions with controlling shareholders or its relative or in which a controlling shareholder has a personal interest (whether or not the transaction is an extraordinary transaction), under the supervision of the audit committee or other party determined by the audit committee and in accordance with standards to be determined by the audit committee, or whether a different process determined by the audit committee should be implemented for the approval of such transactions;
- determining the process for the approval of certain transactions with controlling shareholders or in which a controlling shareholder has a personal interest that the audit committee has determined are not extraordinary transactions but are not immaterial transactions; and
- responsible for the handling of employees' complaints as to the management of our business and the protection to be provided to such employees.

### ***Compensation Committee***

Our compensation committee is comprised of Mr. Rami Guzman, Mr. Ilan Flato and Mrs. Dana Gross. Mr. Rami Guzman serves as the compensation committee chairman.

#### *Composition requirements*

The Companies Law requires public companies to appoint a compensation committee; however, following the Company's determination to adopt the relief provided under the Relief Regulations, as described above, the composition of our compensation committee is governed by the rules set forth in the Nasdaq Listing Rules and the Exchange Act.

Under the Nasdaq Listing Rules, we are required to maintain a compensation committee consisting of at least two directors, each of whom is an independent director within the meaning of the Nasdaq Listing Rules.

The Board of Directors has determined that all of the members of the compensation committee meet the independence requirements for compensation committee service of the Nasdaq Listing Rules and the Exchange Act.

#### *Compensation Committee role*

Our board of directors adopted a compensation committee charter, which sets forth the responsibilities of the compensation committee consistent with the Nasdaq Listing Rules and the requirements for compensation committees under the Companies Law, including the following:

- recommending to the Board of Directors for its approval (i) a compensation policy for officers and directors, (ii) once every three years, whether to extend the compensation policy, subject to receipt of the required corporate approvals approval (either a new compensation policy or the continuation of an existing compensation policy must in any case occur every three years); and (iii) periodic updates to the compensation policy. In addition, the compensation committee is required to periodically review the implementation of the compensation policy;
- approving transactions relating to terms of office and employment of office holders, which require the approval of the compensation committee pursuant to the Companies Law; and
- reviewing and approving equity grants to non-executive employees under our equity-based incentive plans.

### ***Nomination Committee***

Our nomination committee is comprised of Mr. Kalman Kaufman, Mrs. Dana Gross, Mr. Rami Guzman and Yoav Z. Chelouche. Mr. Kalman Kaufman serves as the nomination committee chairman.

Our board of directors has adopted a nomination committee charter setting forth the responsibilities of the nomination committee, which include:

- overseeing and assisting our board of directors in reviewing and recommending nominees for election as directors;
- assessing the performance of the members of our board of directors;
- reviewing and recommending to our board of directors the structure and members of committees of the board; and
- assisting our board of directors in carrying out its responsibilities related to chief executive officer succession planning.

### ***Internal Auditor***

Under the Companies Law, the board of directors of an Israeli public company must appoint an internal auditor, who is recommended by the audit committee. The role of the internal auditor is to examine, among other matters, whether the company's actions comply with the law and orderly business procedure. Under the Companies Law, the internal auditor may be an employee of the company but not an office holder (within the meaning of the Companies Law) or an interested party (i.e., a person who holds more than 5% of the Company's outstanding shares or voting rights or who has the power to appoint a director or the general manager of the company) or a relative of an office holder or interested party, and may not be the company's independent auditor or its representative. Joseph Ginossar of Fahn Kanne, an affiliate of Grant Thornton International, serves as our internal auditor.

### ***Director Service Contracts***

Other than under the employment agreement with Mr. Russell Ellwanger, our Chief Executive Officer and a director, as detailed in "Item 6. Directors, Senior Management and Employees—B. Compensation," we do not have written agreements with any director providing for benefits upon the termination of his or her services with our Company.

## **D. EMPLOYEES**

The following table sets forth for the last three fiscal years, the number of our employees engaged in the specified activities.

	<b>As of December 31,</b>		
	<b>2019</b>	<b>2018</b>	<b>2017</b>
Process and product engineering, R&D and design	1,040	1,065	1,054
Manufacturing and operations	3,569	3,860	3,917
Manufacturing support	385	394	399
Sales and marketing, finance & administration	285	267	271
<b>Total</b>	<b>5,279</b>	<b>5,586</b>	<b>5,641</b>

As of December 31, 2019, we had 1,533 employees located in Israel, 1,256 employees located in the United States, 2,475 employees located in Japan and 15 employees located in other countries in Asia Pacific.

Other than a special collective agreement relating to our Israeli employees regarding pension contributions, as described below, our employees in Israel are not covered under a collective bargaining agreement. However, in Israel we are subject to certain labor statutes and national labor court precedent rulings, as well as to certain provisions of the collective bargaining agreements between the Histadrut (General Federation of Labor in Israel) and the Coordination Bureau of Economic Organizations, by virtue of expansion orders issued in accordance with relevant labor laws by the Israeli Ministry of Labor and Welfare, and which apply such agreement provisions to our employees even though they are not directly part of a union that has signed a collective bargaining agreement. The labor laws and court rulings that apply to our employees principally concern the minimum wage laws, procedures for dismissing employees, determination of severance pay, leaves of absence (such as annual vacation or maternity leave), sick pay and other conditions for employment. The expansion orders which apply to our employees principally concern the requirement for length of the workday and workweek, mandatory contributions to a pension fund, annual recreation allowance, travel expenses payment and other conditions of employment.

Under the special collective bargaining agreement to which we are party relating to our Israeli employees, we are required to contribute funds to an employee's manager's insurance fund and/or pension fund. Such funds generally provide a combination of savings plans, insurance and severance pay benefits to the employee, securing his or her right to receive pension or giving the employee a lump sum payment upon retirement, under certain circumstances, if legally entitled, upon termination of employment. Tower's Israeli employees contribute an amount equal to 6% of his or her wages to the manager's insurance fund or pension fund, and Tower contributes an additional 14.83% to 15.83% of the employee's wages to such funds. Israeli law generally requires severance pay upon the retirement or death of an employee or termination of employment by the employer without due cause. Under the special collective bargaining agreement, Section 14 to the Israeli Severance Pay Law, 5723-1963, applies to Tower, according to which the employer's contribution to severance pay is in lieu of payment of severance pay upon termination of employment. Therefore, the monthly contributions as mentioned above constitute the entire required payment for severance pay, and we are not required to pay any additional sum upon termination of employment of our Israeli employees for the period during which Sections 14 applies.

A portion of the employees at its Newport Beach, California fab are represented by a union and covered by a collective bargaining agreement. NPB Co. maintains a defined benefit pension plan for certain of its employees covered by a collective bargaining agreement that provides for monthly pension payments to eligible employees upon retirement. The pension benefits are based on years of service and specified benefit amounts. In addition, the bargaining agreement includes a post-retirement medical plan for certain employees. Certain eligible bargaining union employees who terminate employment are provided with a lump-sum benefit payment.

Most of TPSCo's employees at its Japan fabs are represented by a union and covered by a collective bargaining agreement. TPSCo established a Defined Contribution Retirement Plan (the "DC Plan") for its employees through which TPSCo contributes approximately 10% with employee average match of 1% from employee base salary to the DC Plan. Such contribution releases the employer from further obligation to any payments upon termination of employment. The contribution is remitted either to third party benefit funds that are responsible to invest the funds based on employee preference, or directly, to those employees who elected not to enroll in the DC Plan.

## E. SHARE OWNERSHIP

As of March 31, 2020, no individual director or senior manager beneficially owned (determined in accordance with the rules of the SEC) one percent or more of our outstanding ordinary shares. As of March 31, 2020, our directors and senior managers held options and restricted stock units to purchase an aggregate of 1.14 million of our ordinary shares. The options have an average exercise price of \$13.51 per share and expire between 2021 and 2023. For information regarding our equity-based incentive plans, see Note 15B to our consolidated financial statements included in this annual report.

### ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

#### A. MAJOR SHAREHOLDERS

Information concerning the beneficial ownership (as defined in Rule 13d-3 under the Securities Exchange Act of 1934, as amended) and ownership on a diluted basis, of our ordinary shares by any person who is known to us to own at least 5% of our issued and outstanding ordinary shares as of March 31, 2020 is set forth below. The percentage of beneficial ownership of our ordinary shares is based on 106.8 million ordinary shares issued and outstanding as of March 31, 2020.

The voting rights of our major shareholders do not differ from the voting rights of other holders of our ordinary shares.

Name of Beneficial Owner	Ordinary Shares Beneficially Owned		
	Number	Percent(1)	Percent (Diluted)(2)
Senvest Management, LLC (3)	8,055,305	7.54%	7.38%
Wellington Management Group LLP (4)	7,571,345	7.09%	6.94%
Phoenix Holdings Ltd. (5)	7,533,147	7.05%	6.90%

- (1) In accordance with the rules of the SEC, assumes (i) the holder's beneficial ownership of all of our outstanding ordinary shares and all ordinary shares that the holder has a right to purchase within 60 days of March 31, 2020; and (ii) no other exercisable or convertible securities held by other holders has been exercised or converted into ordinary shares.
- (2) Assumes (i) the holder's beneficial ownership of all of our outstanding ordinary shares and all ordinary shares that the holder has a right to purchase within 60 days of March 31, 2020; and (ii) all currently outstanding securities to purchase ordinary shares have been exercised by all holders.
- (3) Based solely upon, and qualified in its entirety with reference to, a notice provided to the Company by Senvest Management, LLC as of March 31, 2020.
- (4) Based solely upon, and qualified in its entirety with reference to, a notice provided to the Company by Wellington Management Group LLP. as of March 31, 2020.
- (5) Based solely upon and qualified in its entirety with reference to, a notice provided to the Company by Phoenix Holdings Ltd. as of March 31, 2020.

As of April 20, 2020, based on information provided to us by our transfer agent in the United States there were a total of 14 holders of record of our ordinary shares, of which 9 were registered with addresses in the United States. Such U.S. record holders were, as of such date, the holders of record of approximately 68% of our outstanding ordinary shares. The number of record holders in the United States is not representative of the number of beneficial holders nor is it representative of where such beneficial holders are resident since many of these ordinary shares were held by brokers or other nominees (including one U.S. nominee company, CEDE & Co., which held approximately 68% of our outstanding ordinary shares as of such date, including those held for the benefit of the Tel Aviv Stock Exchange clearing house as a member of Depository Trust Company).

## **B. RELATED PARTY TRANSACTIONS**

Other than the executive and director compensation, executive officer employment agreements, indemnification and exculpation arrangements and directors' and officers' liability insurance policy, as discussed elsewhere in the annual report, for the years 2017, 2018 and 2019 and up to the date of the document, we have not been or are not a party to any transactions in which any of our directors, executive officers or holders of more than 5% of our share capital, or any immediate family member of, or person sharing the household with, any of these individuals or entities, had or will have a direct or indirect material interest. For additional information, see Note 18 to the consolidated financial statements included herein.

## **C. INTERESTS OF EXPERTS AND COUNSEL**

Not applicable.

## **ITEM 8. FINANCIAL INFORMATION**

### **A. CONSOLIDATED STATEMENTS AND OTHER FINANCIAL INFORMATION**

#### **Consolidated Financial Statements.**

See "Item 18 – Financial Statements".

#### **Legal Proceedings**

NPB Co. leases its fabrication facilities under operational lease contracts. In the amendments to its leases, (i) NPB Co. secured various contractual safeguards designed to limit and mitigate any adverse impact of construction activities on its fabrication operations; and (ii) the lease includes certain obligations, including certain noise abatement actions at the fabrication facility. The landlord has claimed that noise abatement actions that have been implemented according obligations under the lease are not adequate under the terms of the lease. NPB Co. does not agree with, and is disputing these claims.

#### **Dividend Policy**

We currently intend to retain future earnings to finance our growth and acquisition strategy, as well as capacity growth and our ongoing operations. Our board of directors has sole discretion whether to pay dividends. We do not anticipate paying any dividends in the foreseeable future. If our board of directors will decide to pay dividends, the form, frequency and amount will depend upon our future growth and acquisition strategy, as well as our capacity growth plans, future operations and earnings, capital requirements and surplus, general financial condition, contractual and legal restrictions and other factors that our directors may deem relevant. The Companies Law imposes restrictions on our ability to declare and pay dividends. Furthermore, under the indenture for our Series G Debentures, a distribution of dividends is subject to us satisfying certain financial covenants and is subject to certain limitations.

## **B. SIGNIFICANT CHANGES**

No significant change has occurred since December 31, 2019, except as disclosed in this annual report.

## **ITEM 9. THE OFFER AND LISTING**

Our ordinary shares are listed and traded on the NASDAQ Stock Market (on the NASDAQ Global Market through March 16, 2012, on the NASDAQ Capital Market from March 17, 2012 through September 6, 2012, and on the NASDAQ Global Select Market since that date) and on the Tel Aviv Stock Exchange (TASE) under the symbol “TSEM”.

## **ITEM 10. ADDITIONAL INFORMATION**

### **A. SHARE CAPITAL.**

Not applicable.

### **B. MEMORANDUM AND ARTICLES OF ASSOCIATION**

A copy of our Articles of Association is attached as Exhibit 1.1 to this annual report, as amended by Exhibits 1.2-1.7 to this annual report. The information called for by this Item is set forth in Exhibit 2.1 to this annual report and is incorporated by reference into this annual report.

### **C. MATERIAL CONTRACTS**

For information regarding material contracts see Notes 10, 11, 13, 14, 15 and 16 to our consolidated financial statements for the year ended December 31, 2019 and the agreements described under the caption “Item 5. Operating and Financial Review and Prospects - B. Liquidity and Capital Resources”.

#### *TPSCo Agreements*

In March 2014, we acquired a 51% equity stake in TPSCo, a company formed by Panasonic. Panasonic transferred its semiconductor wafer manufacturing process and 8 inch and 12 inch capacity tools at its three fabs (Uozu E, Tonami CD and Arai E) to TPSCo, and entered into a manufacturing agreement with TPSCo for a period of five years of volume production. As consideration for our 51% equity holding in TPSCo, at the closing of the transaction, we issued to Panasonic 870,454 of our ordinary shares valued at approximately \$7.4 million. In June 2014, Panasonic’s shares in TPSCo were transferred, and its rights and obligations were assigned, to its wholly-owned subsidiary, PSCS. In March 2019, agreements were signed between Tower and/or TPSCo and PSCS to extend the business relationship by an additional three-year period under certain amended terms, including a manufacturing agreement between TPSCo and PSCS, under which TPSCo manufactures products for PSCS under a revised pricing structure, and a lease agreement under which TPSCo’s fabs’ land and buildings are leased by PSCS to TPSCo. In November 2019, Panasonic announced the sale of its shares in PSCS to Nuvoton Technology Corp. (a Taiwan based semiconductor company, majority owned by Winbond Electronics Corporation), in a transaction that is planned to close in June 2020.

### **D. EXCHANGE CONTROLS**

There are currently no Israeli government laws, decrees, regulations or other legislation that restrict or affect our import or export of capital, including the availability of cash and cash equivalents for use by us, or the remittance of dividends, interest or other payments to holders of our securities that are non-residents of Israel, except under certain circumstances, for nationals of countries that are, or have been, in a state of war with Israel.

### **E. TAXATION**

The discussion below does not purport to be an official interpretation of the tax law provisions mentioned therein or to be a comprehensive description of all tax law provisions which might apply to the acquisition, ownership and disposition of our securities or to reflect the views of the relevant tax authorities, and it is not meant to replace professional advice in these matters. The discussion below is based on current, applicable tax law, which may be changed by future legislation or reforms. Non-residents should obtain professional tax advice with respect to the tax consequences of acquiring, holding or selling our securities under the laws of their countries of residence of acquiring, holding or selling our securities.

## Israeli Taxation

### *General Corporate Tax*

Israeli companies are subject to corporate tax at the rate of 23% commencing 2018. However, the effective corporate tax rate payable by a company which derives income from a “Preferred Enterprise” (as further discussed below) may be considerably less.

### *Israeli Tax on Capital Gains*

An individual is subject to a tax at a rate of 25% on real capital gains derived from the sale of shares, unless such individual claims a deduction for interest and linkage differences expenses in connection with the purchase and holding of such shares and as long as the individual is not a “substantial shareholder” in the company issuing the shares.

A “substantial shareholder” is generally a person who alone, or together with his relative or another person who collaborates with him on a regular basis, holds, directly or indirectly, at least 10% of any of the “means of control” of the corporation. “Means of control” generally include the right to vote, receive profits, nominate a director or an officer, receive assets upon liquidation, or instruct someone who holds any of the aforesaid rights regarding the manner in which he or she is to exercise such right(s), and all regardless of the source of such right.

An individual who is a substantial shareholder at the time of sale or at any time during the preceding 12-month period, is subject to tax at a rate of 30% in respect of real capital gains derived from the sale of shares issued by the company in which he or she is a substantial shareholder.

Individual shareholders dealing in securities in Israel are taxed at their marginal tax rates applicable to business income (up to 47% from 2017).

Under present Israeli tax legislation, the tax rate applicable to real capital gain derived by Israeli resident corporations from the sale of shares of an Israeli company is the general corporate tax rate at a rate of 23% from 2018 onwards.

Non-Israeli residents are exempt from Israeli capital gains tax on any gains derived from the sale of shares in an Israeli corporation publicly traded on the TASE and/or on a foreign stock exchange, provided such gains do not derive from a permanent establishment of such shareholders in Israel and that such shareholders did not acquire their shares prior to the issuer’s initial public offering. However, non-Israeli corporations will not be entitled to such exemption if Israeli residents (i) have a controlling interest of more than 25% in such non-Israeli corporation, or (ii) are the beneficiaries of or is entitled to 25% or more of the revenues or profits of such non-Israeli corporation, whether directly or indirectly. In addition, the sale of the shares may be exempt from Israeli capital gain tax under the provisions of an applicable tax treaty. For example, the Convention between the Government of the United States of America and the Government of Israel with respect to Taxes on Income, or the “US-Israel Tax Treaty,” generally exempts U.S. residents from Israeli capital gains tax in connection with such sale, provided that (i) the U.S. resident owned, directly or indirectly, less than 10% of the Israeli resident company’s voting power at any time within the 12-month period preceding such sale; (ii) the seller, if an individual, has been present in Israel for less than 183 days (in the aggregate) during the taxable year; and (iii) the capital gain from the sale was not generated through a permanent establishment of the U.S. resident in Israel.

The purchaser of the shares, the stockbrokers who effected the transaction or the financial institution holding the shares through which payment to the seller is made are obligated, subject to the above-referenced exemptions if certain conditions are met, to withhold tax on the real capital gain resulting from a sale of shares at the rate of 25%.

#### *Israeli Tax on Interest Income and on Original Issuance Discount*

Interest and Original Issuance Discount (OID) on our Series G debentures are, in general, subject to Israeli tax of up to 15% (which would be withheld at source) if received by an individual. However, tax at the marginal rate (up to 50%) shall apply, if one of the following applies:

- if the interest or OID are business income in the hands of the recipient,
- if the interest is recorded or should be recorded in the individual's accounting books,
- if the recipient is a substantial shareholder of the company,
- if financing expenses related to the purchase of the debentures were deducted by the individual in the calculation of the individual's Israeli taxable income, or
- if the individual is an employee, supplier, or service provider of the company or has another special relationship with the company and the tax authorities have not been persuaded that the payment of interest was not affected by the relationship between the parties.

Interest and OID paid on our Series G debentures to Israeli corporations will, in general, be subject to withholding tax at a rate of 23% from 2018 onwards.

Interest and OID paid on our debentures to non-Israeli residents may be subject to lower withholding tax in an applicable tax treaty. For example, under the US-Israel Tax Treaty, the maximum Israeli tax withheld on interest and OID paid to a US resident (other than with respect to payments attributed to a permanent establishment in Israel) is 17.5%.

Interest, OID or inflation linkage differentials paid to a non-Israeli resident which does not have a permanent establishment in Israel, on debentures issued by an Israeli corporation and which are traded on the TASE, are generally exempt from taxes in Israel. However, this exemption from taxes will not apply (and consequently tax will be withheld at source):

- if the recipient is a substantial shareholder of the company,
- if the recipient is an affiliate of the company, or
- if the individual is an employee, supplier, or service provider of the company and the tax authorities have not been persuaded that the payment was not affected by the relationship between the parties.

#### *Israeli Tax on Dividend Income*

Israeli resident corporations are generally exempt from Israeli corporate tax for dividends paid on our ordinary shares.

On distributions of dividends other than bonus shares, or stock dividends, to Israeli and non-Israeli resident individuals and non-Israeli resident corporations we would be required to withhold income tax at the rate of 25% (or 30% if such shareholder is a "substantial shareholder" at the time receiving the dividend or on any date in the 12 months preceding such date and the shares are not held through a nominee company). If the income out of which the dividend is being paid is attributable to a privileged Enterprise or Preferred Enterprise under the Investment Law, the rate is generally not more than 20%. A different rate may be provided for in an applicable tax treaty.

Under the US-Israel Tax Treaty, Israeli withholding tax on dividends paid to a US resident may not, in general, exceed 25%. Where the recipient is a US corporation owning 10% or more of the voting stock of the paying corporation during the part of the tax year which precedes the date of payment of the dividend and during the entire tax year preceding such year, the Israeli tax withheld may not exceed 12.5% or 15% in the case of dividends paid out of the profits of a corporation entitled to the benefits of the Investment Law, subject to certain conditions.

#### *Law for the Encouragement of Capital Investments, 5719-1959*

The Law for the Encouragement of Capital Investments, 5719-1959, generally referred to as the Investment Law, was originally enacted in order to provide certain incentives for capital investments in production facilities (or other eligible assets).

In recent years, the Investment Law has undergone major reforms and several amendments which were intended to provide expanded tax benefits and to simplify the bureaucratic process relating to the approval of investments qualifying under the Investment Law. The different benefits under the Investment Law depend on the specific year in which the enterprise received approval from the Investment Center or the year it was eligible for Approved/Privileged/Preferred Enterprise status under the Investment Law, and the benefits available at that time.

#### *Tax Benefits Prior to the 2005 Amendment*

Prior to an amendment to the Investment Law effective as of April 1, 2005, generally referred to as the 2005 Amendment, a capital investment in eligible production facilities (or other eligible assets) could, upon application to the Investment Center of the Israeli Ministry of Economy (formerly named the Ministry of Industry, Trade and Labor), generally referred to as the "Investment Center," be designated as an "Approved Enterprise" and accordingly, entitled to certain tax benefits under the Investment Law. Each certificate of approval for an Approved Enterprise relates to a specific investment program in the Approved Enterprise, delineated both by the financial scope of the investment and by the physical characteristics of the facility or the asset.

#### *Tax Benefits Subsequent to the 2005 Amendment*

Pursuant to the 2005 Amendment, a company whose facilities meet certain criteria set forth in the 2005 Amendment may claim certain tax benefits offered by the Investment Law (as further described below) directly in its tax returns, without the need to obtain prior approval. In order to receive the tax benefits, a company must make an investment which meets all of the conditions, including exceeding a minimum entitling investment amount, set forth in the Investment Law. Such investment allows a company to receive "Benefited Enterprise" status, and may be made over a period of no more than three years ending at the end of the year in which the company chose to have the tax benefits apply to its Benefited Enterprise, referred to as the "Year of Election."

The extent of the tax benefits available under the 2005 Amendment to qualifying income of a Benefited Enterprise depends on, among other things, the geographic location in Israel of the Benefited Enterprise. The location will also determine the period for which tax benefits are available.

The benefits available to a Benefited Enterprise are subject to the fulfillment of conditions stipulated in the Investment Law and its regulations. If a company does not meet these conditions, it may be required to refund the amount of tax benefits, as adjusted by the Israeli consumer price index, plus interest, or other monetary penalties.

An amendment to the Investment Law that became effective on January 1, 2011, generally referred to as the 2011 Amendment, made significant changes to the Investment Law, which revamped the tax incentive regime in Israel. The main changes are, inter alia, as follows:

- Industrial companies meeting the criteria set out by the Investment Law for a “Preferred Income” of a “Preferred Enterprise” (as defined below) will be eligible for flat tax rates of 7.5% or 16% in 2017 and thereafter, with the actual tax rates determined by the location of the enterprise. The location of Tower’s fabrication facilities in Israel entitles it to benefit from a tax rate of 7.5%. The tax incentives offered by the Investment Law are no longer dependent neither on minimum qualified investments nor on foreign ownership.
- A company can enjoy both government grants and tax benefits concurrently. Governmental grants will not necessarily be dependent on the extent of enterprise’s investment in assets and/or equipment. The approval of “Preferred Enterprise” status by either the Israel Tax Authority or the Investment Center will be accepted by the other. Therefore, a Preferred Enterprise may be eligible to receive both tax incentives and government grants, under certain conditions.
- Under the transition provisions, any tax benefits obtained prior to 2011 shall continue to apply until expired, unless the company elects to apply the provisions of the new provisions to its income.

“Preferred Income” is defined as income from a Preferred Enterprise, as specified below, with the condition that the income was produced or arose in the course of the enterprise’s ordinary activity in Israel from one of the following (excluding certain income derives from intangible assets which are not attributed to the enterprise’s production): income from the sale of products of the Preferred Enterprise (including components that were produced by other enterprises); income from the sale of semiconductors produced by other non-related enterprises which use the Preferred Enterprise’s self-developed know-how; income for providing a right to use the Preferred Enterprise’s know how or software; royalties from the use of the know-how or software which was confirmed by the Head of the Investment Center to be related to the production activity of the Preferred Enterprise; and services with respect to the aforementioned sales. In addition, the definition of “Preferred Income” also includes income from the provision of industrial R&D services to foreign residents to the extent that the services were approved by the Head of Research for the Industrial Development and Administration.

A “Preferred Enterprise” is defined as an Industrial Enterprise (including, inter alia, an enterprise which provides approved R&D services to foreign residents), which generally more than 25% of its business income is from export. As mentioned above, these tax incentives no longer depend on minimum qualified investments nor on foreign ownership.

The Investment Law also determines the conditions and limitations applying to the tax benefits offered to a “Special Preferred Enterprise” (as defined below). A “Special Preferred Enterprise” will be able to enjoy corporate income tax rate in a rate of 5% if located in a preferred zone and 8% if not located in a preferred zone.

A “Special Preferred Enterprise” is defined as a Preferred Enterprise which meets all of the following conditions, during the relevant tax year: (a) its Preferred Income is equal to or exceeds NIS 1 billion; (b) the total income of the company which owns the Preferred Enterprise or which operates in the same field of the Preferred Enterprise and which consolidates in its financial reports the company that owns the Preferred Enterprise equals or exceeds NIS 10 billion; and (c) its business plan was approved by the authorities as significantly benefitting the Israeli economy.

Dividends paid out of income attributed to a Preferred Enterprise are generally subject to withholding tax at source at a rate of 20% or such lower rate as may be provided in an applicable tax treaty upon a request submitted by the recipient of such dividends. However, if such dividends are paid to an Israeli company no tax will be withheld (although, if such dividends are subsequently distributed to individuals or a non-Israeli company, withholding tax at a rate of 20% or such lower rate as may be provided in an applicable tax treaty will apply).

The provisions of the 2011 Amendment do not apply to existing Benefited Enterprises or Approved Enterprises, which will continue to be entitled to the tax benefits under the Investment Law as in effect prior to the 2011 Amendment. Nevertheless, a company owning such enterprises may choose to apply the 2011 Amendment to its existing enterprises while waiving benefits provided under the Investment Law as in effect prior to the 2011 Amendment. Once a company elects to be classified as a Preferred Enterprise under the provisions of the 2011 Amendment, the election cannot be rescinded and such company will no longer enjoy the tax benefits of its Approved/Privileged Enterprises.

As Tower has net operating loss carryforwards for tax purposes, it has not elected to apply Preferred Enterprise status to date; however, as we believe that we qualify as a Preferred Enterprise, we apply the tax rate of 7.5% in determining our Israeli current tax provision, deferred tax assets and liabilities, but there can be no assurance that we will so qualify or that the benefits described above will be available to us in the future. If we do not qualify as a Preferred Enterprise, we may be required to amend our Israeli current tax provisions and our net profit may be reduced.

An additional amendment to the Investment Law was enacted as part of the Economic Efficiency Law that was published on December 29, 2016, and became effective as of January 1, 2017, generally referred to as the 2017 Amendment. The benefits under the 2017 Amendment do not currently apply to Tower.

#### *Excess Tax*

Subject to the provisions of an applicable tax treaty, individuals who are subject to tax in Israel are also subject to an additional tax at the rate of 3% on the annual taxable income (including, but not limited to, dividends, interest and capital gain) exceeding NIS 649,560 in 2019 and NIS 651,600 in 2020.

#### *Estate and Gift Tax*

Israeli law presently does not impose estate or gift taxes.

#### ***U.S. Federal Income Tax Considerations***

The following discussion is a description of the material U.S. federal income tax considerations applicable to an investment in the ordinary shares by U.S. Holders who acquire our ordinary shares and hold them as capital assets for U.S. federal income tax purposes. As used in this section, the term "U.S. Holder" means a beneficial owner of an ordinary share who is:

- an individual citizen or resident of the United States;
- a corporation created or organized in or under the laws of the United States or of any state of the United States or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if the trust has elected validly to be treated as a United States person for U.S. federal income tax purposes or if a U.S. court is able to exercise primary supervision over the trust's administration and one or more United States persons have the authority to control all of the trust's substantial decisions.

The term “Non-U.S. Holder” means a beneficial owner of an ordinary share who is not a U.S. Holder. The tax consequences to a Non-U.S. Holder may differ substantially from the tax consequences to a U.S. Holder. Certain aspects of U.S. federal income tax relevant to a Non-U.S. Holder also are discussed below.

This description is based on provisions of the U.S. Internal Revenue Code of 1986, as amended, referred to in this discussion as the Code, existing and proposed U.S. Treasury regulations and administrative and judicial interpretations, each as available and in effect as of the date of this annual report. These sources may change, possibly with retroactive effect, and are open to differing interpretations. This description does not discuss all aspects of U.S. federal income taxation that may be applicable to investors in light of their particular circumstances or to investors who are subject to special treatment under U.S. federal income tax law, including:

- insurance companies;
- dealers in stocks, securities or currencies;
- financial institutions and financial services entities;
- real estate investment trusts;
- regulated investment companies;
- persons that receive ordinary shares as compensation for the performance of services;
- tax-exempt organizations;
- persons that hold ordinary shares as a position in a straddle or as part of a hedging, conversion or other integrated instrument;
- individual retirement and other tax-deferred accounts;
- expatriates of the United States;
- persons (other than Non-U.S. Holders) having a functional currency other than the U.S. dollar; and
- direct, indirect or constructive owners of 10% or more, by voting power or value, of us.

This discussion also does not consider the tax treatment of persons or partnerships that hold ordinary shares through a partnership or other pass-through entity or the possible application of United States federal gift or estate tax or alternative minimum tax.

We urge you to consult with your own tax advisor regarding the tax consequences of investing in the ordinary shares, including the effects of federal, state, local, foreign and other tax laws.

#### *Distributions Paid on the Ordinary Shares*

Subject to the discussion below under “PFIC Rules,” a U.S. Holder generally will be required to include in gross income as ordinary dividend income the amount of any distributions paid on the ordinary shares, including the amount of any Israeli taxes withheld, to the extent that those distributions are paid out of our current or accumulated earnings and profits as determined for U.S. federal income tax purposes. Subject to the discussion below under “PFIC Rules” distributions in excess of our earnings and profits will be applied against and will reduce the U.S. Holder’s tax basis in its ordinary shares and, to the extent they exceed that tax basis, will be treated as gain from a sale or exchange of those ordinary shares. Our dividends will not qualify for the dividends-received deduction applicable in some cases to U.S. corporations. Dividends paid in NIS, including the amount of any Israeli taxes withheld, will be includible in the income of a U.S. Holder in a U.S. dollar amount calculated by reference to the exchange rate in effect on the date they are included in income by the U.S. Holder, regardless of whether the payment in fact is converted into USD. Any gain or loss resulting from currency exchange fluctuations during the period from the date the dividend is includible in the income of the U.S. Holder to the date that payment is converted into USD generally will be treated as ordinary income or loss.

A non-corporate U.S. holder's "qualified dividend income" is subject to tax at reduced rates not exceeding 20% for tax years beginning 2012 (15% for 2011 and prior years) . For this purpose, "qualified dividend income" generally includes dividends paid by a foreign corporation if either:

- (a) the stock of that corporation with respect to which the dividends are paid is readily tradable on an established securities market in the U.S., or
- (b) that corporation is eligible for benefits of a comprehensive income tax treaty with the U.S. which includes an information exchange program and is determined to be satisfactory by the U.S. Secretary of the Treasury. The Internal Revenue Service has determined that the U.S.-Israel Tax Treaty is satisfactory for this purpose.

In addition, under current law a U.S. Holder must generally hold his ordinary shares for more than 60 days during the 121 day period beginning 60 days prior to the ex-dividend date, and meet other holding period requirements for qualified dividend income.

Dividends paid by a foreign corporation will not qualify for the reduced rates, if such corporation is treated, for the tax year in which the dividend is paid or the preceding tax year, as a "passive foreign investment company" for U.S. federal income tax purposes. We do not believe that we will be classified as a "passive foreign investment company" for U.S. federal income tax purposes for our current taxable year. However, see the discussion under "PFIC Rules" below.

Subject to the discussion below under "Information Reporting and Back-up Withholding," a Non-U.S. Holder generally will not be subject to U.S. federal income or withholding tax on dividends received on ordinary shares unless that income is effectively connected with the conduct by that Non-U.S. Holder of a trade or business in the United States.

#### *Foreign Tax Credit*

Any dividend income resulting from distributions we pay to a U.S. Holder with respect to the ordinary shares generally will be treated as foreign source income for U.S. foreign tax credit purposes, which may be relevant in calculating such holder's foreign tax credit limitation. Subject to certain conditions and limitations, Israeli tax withheld on dividends may be deducted from taxable income or credited against a U.S. Holder's U.S. federal income tax liability. The limitation on foreign taxes eligible for credit is calculated separately with respect to specific classes of income. For this purpose, dividends that we distribute generally should constitute "passive category income," or, in the case of certain U.S. Holders, "general category income." A foreign tax credit for foreign taxes imposed on distributions may be denied if the taxpayer does not satisfy certain minimum holding period requirements. The rules relating to the determination of foreign source income and the foreign tax credit are complex, and the availability of a foreign tax credit depends on numerous factors. Each prospective purchaser who would be a U.S. Holder should consult with its own tax advisor to determine whether its income with respect to the ordinary shares would be foreign source income and whether and to what extent that purchaser would be entitled to the credit.

## *Disposition of Ordinary Shares*

Upon the sale or other disposition of ordinary shares, subject to the discussion below under “PFIC Rules” a U.S. Holder generally will recognize capital gain or loss equal to the difference between the amount realized on the disposition and the holder’s adjusted tax basis in the ordinary shares. U.S. Holders should consult their own advisors with respect to the tax consequences of the receipt of a currency other than USD upon such sale or other disposition.

In the event there is an Israeli income tax on gain from the disposition of ordinary shares, such tax should generally be the type of tax that is creditable for U.S. tax purposes; however, because it is likely that the source of any such gain would be a U.S. source, a U.S. foreign tax credit may not be available. U.S. shareholders should consult their own tax advisors regarding the ability to claim such credit.

Gain or loss upon the disposition of the ordinary shares will be treated as long-term if, at the time of the sale or disposition, the ordinary shares were held for more than one year. Long-term capital gains realized by non-corporate U.S. Holders are generally subject to a lower marginal U.S. federal income tax rate than ordinary income, other than qualified dividend income, as defined above. The deductibility of capital losses by a U.S. Holder is subject to limitations. In general, any gain or loss recognized by a U.S. Holder on the sale or other disposition of ordinary shares will be U.S. source income or loss for U.S. foreign tax credit purposes. U.S. Holders should consult their own tax advisors concerning the source of income for U.S. foreign tax credit purposes and the effect of the U.S.-Israel Tax Treaty on the source of income.

Subject to the discussion below under “Information Reporting and Back-up Withholding”, a Non-U.S. Holder generally will not be subject to U.S. federal income or withholding tax on any gain realized on the sale or exchange of ordinary shares unless:

- that gain is effectively connected with the conduct by the Non-U.S. Holder of a trade or business in the United States, or
- in the case of any gain realized by an individual Non-U.S. Holder, that holder is present in the United States for 183 days or more in the taxable year of the sale or exchange, and other conditions are met.

## *Information Reporting and Back-up Withholding*

Holders generally will be subject to information reporting requirements with respect to dividends paid in the United States on ordinary shares. In addition, Holders will be subject to back-up withholding tax on dividends paid in the United States on ordinary shares unless the holder provides an IRS certification or otherwise establishes an exemption. Holders will be subject to information reporting and back-up withholding tax on proceeds paid within the United States from the disposition of ordinary shares unless the holder provides an IRS certification or otherwise establishes an exemption. Information reporting and back-up withholding may also apply to dividends and proceeds paid outside the United States that are paid by certain “U.S. payors” or “U.S. middlemen,” as defined in the applicable Treasury regulations, including:

- (1) a U.S. person;
- (2) the government of the U.S. or the government of any state or political subdivision of any state (or any agency or instrumentality of any of these governmental units);

- (3) a controlled foreign corporation;
- (4) a foreign partnership that is either engaged in a U.S. trade or business or whose United States partners in the aggregate hold more than 50% of the income or capital interests in the partnership;
- (5) a foreign person that derives 50% or more of its gross income for certain periods from the conduct of a trade or business in the U.S.; or
- (6) a U.S. branch of a foreign bank or insurance company.

The back-up withholding tax rate is 28%. Back-up withholding and information reporting will not apply to payments made to Non-U. S. Holders if they have provided the required certification that they are not United States persons.

In the case of payments by a payor or middleman to a foreign simple trust, foreign grantor trust or foreign partnership, other than payments to a holder that qualifies as a withholding foreign trust or a withholding foreign partnership within the meaning of the Treasury regulations and payments that are effectively connected with the conduct of a trade or business in the United States, the beneficiaries of the foreign simple trust, the person treated as the owner of the foreign grantor trust or the partners of the foreign partnership will be required to provide the certification discussed above in order to establish an exemption from backup withholding tax and information reporting requirements.

The amount of any back-up withholding may be allowed as a credit against a U.S. Holder's U.S. federal income tax liability and may entitle the holder to a refund, provided that required information is furnished to the IRS.

#### *PFIC Rules*

A non-US corporation will be classified as a passive foreign investment company, or a PFIC, for US federal income tax purposes if either (i) 75% or more of its gross income for the taxable year is passive income, or (ii) on a quarterly average for the taxable year by value (or, if it is not a publicly traded corporation and so elects, by adjusted basis), 50% or more of its gross assets produce or are held for the production of passive income.

We do not believe that we satisfied either of the tests for PFIC status in 2019 or in any prior year and we do not expect to be a PFIC for 2020. However, there can be no assurance that we will not be a PFIC in 2020 or a later year. If, for example, the "passive income" earned by us exceeds 75% or more of our "gross income," we will be a PFIC under the "income test." Passive income for PFIC purposes includes, among other things, gross interest, dividends, royalties, rent and annuities. The tests for determining PFIC status are applied annually and it is difficult to make accurate predictions of future income and assets, which are relevant to the determination of PFIC status.

If we were to be a PFIC at any time during a US holder's holding period, such US holder would be required to either: (i) pay an interest charge together with tax calculated at maximum ordinary income tax rates on "excess distributions," which is defined to include gain on a sale or other disposition of ordinary shares, or (ii) so long as the ordinary shares are "regularly traded" on a qualifying exchange, elect to recognize as ordinary income each year the excess in the fair market value, if any, of its ordinary shares at the end of the taxable year over such holder's adjusted basis in such ordinary shares and, to the extent of prior inclusions of ordinary income, recognize ordinary loss for the decrease in value of such ordinary shares (the "mark to market" election). For this purpose, the NASDAQ Global Select Market is a qualifying exchange. US holders are strongly urged to consult their own tax advisers regarding the possible application and consequences of the PFIC rules.

## **F. DIVIDENDS AND PAYING AGENTS**

Not applicable.

## **G. STATEMENT BY EXPERTS**

Not applicable.

## **H. DOCUMENTS ON DISPLAY**

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. Reports and other information filed by us with the SEC may be inspected and copied at the SEC's public reference facilities described below. Although as a foreign private issuer we are not required to file periodic information as frequently or as promptly as United States companies, we generally do publicly announce our quarterly and year-end results promptly and file periodic information with the SEC under cover of Form 6-K. As a foreign private issuer, we are also exempt from the rules under the Exchange Act prescribing the furnishing and content of proxy statements and our officers, directors and principal shareholders are exempt from the reporting and other provisions in Section 16 of the Exchange Act.

You may review and copy our filings with the SEC, including any exhibits and schedules, at the SEC's public reference room at 100 F Street N.E., Washington, D.C. 20549. You may call the SEC at 1-800-SEC-0330 for further information on this public reference room. As a foreign private issuer, all documents which were filed after November 4, 2002 on the SEC's EDGAR system will be available for retrieval on the SEC's website at [www.sec.gov](http://www.sec.gov). These SEC filings are also available to the public on the Israel Securities Authority's Magna website at [www.magna.isa.gov.il](http://www.magna.isa.gov.il), the Tel Aviv Stock Exchange website at <http://www.maya.tase.co.il>, and from commercial document retrieval services. We also generally make available on our own web site ([www.towersemi.com](http://www.towersemi.com)) our quarterly and year-end financial statements as well as other information. We do not intend for any information contained on our website to be considered part of this annual report, and we have included our website address in this annual report solely as an inactive textual reference. We will post on our website any materials required to be posted on such website under applicable corporate or securities laws and regulations, including posting any XBRL interactive financial data required to be filed with the SEC, and any notices of general meetings of our shareholders.

Any statement in this annual report about any of our contracts or other documents is not necessarily complete. If the contract or document is filed as an exhibit to a registration statement, the contract or document is deemed to modify the description contained in this annual report. We urge you to review the exhibits themselves for a complete description of the contract or document.

## **ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

### **Risk of Interest Rate Fluctuation**

Our cash equivalents, short-term deposits and investments in marketable securities are exposed to market risk due to fluctuation in interest rates on our cash deposits and/ or investments, which may affect our interest income and the fair market value of our investments. We manage this exposure by performing ongoing evaluations of our investments in those deposits/ securities. Due to the short maturities of our investments and available for sale securities, their carrying value approximates their fair value.

Debentures Series G issued in 2016 (with an outstanding principal of approximately \$135 million as of December 31, 2019), bear annual fixed interest of 2.79%, the JP loan (with an outstanding principal of approximately \$101 million as of December 31, 2019) bears annual fixed interest of 1.95%, and approximately \$54 million of our subsidiaries' equipment capital leases bear fixed interest at rates of 1.85% or 1.95% per annum. Therefore, we are not subject to cash flow exposure and/or financing expenses to interest rate fluctuations with respect to any of debentures Series G, JP loan and the capital leases.

However, in the event that market interest rates for similar debt decrease and are lower than the interest rate provided under our debentures, capital leases or loans, our actual financing costs would have been higher than they otherwise would have been had our debentures or loans provided for interest at a floating interest rate, which would have impacted our financing expense in an immaterial manner. Assuming a 10% change in market interest rate, the effective impact on our debentures' market value would be immaterial.

### **Foreign Exchange Risk**

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

The USD cost of our operations in Israel is influenced by changes in the USD to NIS exchange rate, with respect to costs that are denominated in NIS. During the year ended December 31, 2019, the USD depreciated against the NIS by 7.8%, as compared to 8.1% appreciation during the year ended December 31, 2018.

The fluctuation of USD against the NIS can affect our results of operations as it relates to our entity in Israel. Appreciation of the NIS has the effect of increasing the cost, in USD terms, of some of our purchases and labor costs that are denominated in NIS, which may lead to erosion in the profit margins. The Company uses foreign currency cylinder transactions to hedge a portion of this currency exposure to be contained within a pre-defined fixed range. In addition, the Company executed swap-hedging transactions to hedge the exposure to the fluctuation of USD against the NIS to the extent it relates to non-convertible Series G debentures, which are denominated in NIS.

The majority of TPSCo 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. In order to mitigate a portion of the net exposure to the USD / JPY exchange rate, the Company has engaged in cylinder hedging transactions to contain the currency's fluctuation within a pre-defined fixed range. During the year ended December 31, 2019, the USD depreciated against the JPY by 1.2%, as compared to 2.4% depreciation during the year ended December 31, 2018. The net effect of USD depreciation against the JPY on TPSCo's assets and liabilities denominated in JPY is presented in the Cumulative Translation Adjustment as part of Other Comprehensive Income in the balance sheet.

Assuming a 10% appreciation of the NIS against the USD on December 31, 2019 (from 3.46 NIS/\$ to 3.14 NIS/\$), the effective impact on our quarterly Israeli expenses would be higher expenses by approximately \$3 million, which would partially be offset by the net impact of the hedging executed using the above described cylinder transactions.

Assuming a 10% appreciation of the JPY against the USD on December 31, 2019 (from 109 JPY/\$ to 99 JPY/\$), the effective impact on our quarterly statement of operation' results would be lower profitability (higher expenses, net of higher revenue) by approximately \$2 million, which would be partially offset by the net impact of the hedging using the above described cylinder transactions and our natural hedging.

As of December 31, 2019, we are subject to currency exchange rate fluctuations of the JPY against the USD in connection with the following JPY debt denominated financings: (i) approximately \$101 million of TPSCo's loans bearing a fixed interest rate of 1.95% per annum and (ii) approximately \$54 million of equipment capital lease agreements with an annual interest rate of 1.85% or 1.95%. However, as of December 31, 2019, we had approximately \$74 million of cash and cash equivalents held in JPY currency accounts and deposits, partially mitigating the above JPY debt exposure. Under current terms of our JPY cash, cash equivalent and debt financing, we have determined that an assumed 10% appreciation of the JPY against the USD rate as of December 31, 2019 (from 109 JPY/\$ to 99 JPY/\$), would not have a material effect on our balance sheet as of December 31, 2019.

### **Impact of Inflation**

We believe that the rate of inflation in Israel, which is ranging between -1% to 1% over the last 6 years, has had a minor effect on our business to date. However, our dollar costs in Israel will increase if inflation in Israel exceeds the devaluation of the NIS against the USD.

For risks related to our traded securities, see "Item 3. Key Information—D. Risk Factors—Risks Related to Our Securities—*Fluctuations in the market price of our traded securities may significantly affect our ability to raise new capital.*"

### **ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES**

Not applicable.

## **PART II**

### **ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES**

None.

### **ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS**

Not applicable.

### **ITEM 15. CONTROLS AND PROCEDURES**

#### ***Evaluation of Disclosure Controls and Procedures***

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (the "Act") as of the end of the period covered by this annual report on Form 20-F. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that these disclosure controls and procedures were effective as of such date, at a reasonable level of assurance, in ensuring that the information required to be disclosed by our company in the reports we file or submit under the Act is (i) accumulated and communicated to our management (including the Chief Executive Officer and Chief Financial Officer) in a timely manner, and (ii) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms.

#### ***Internal Control over Financial Reporting***

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f). Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on our evaluation, management has concluded that our internal control over financial reporting was effective as of December 31, 2019.

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

#### **Attestation Report of the Registered Public Accounting Firm**

The effectiveness of our internal control over financial reporting as of December 31, 2019 has been audited by Brightman Almagor Zohar & Co., a member firm of Deloitte Touche Tohmatsu, an independent registered public accounting firm, as stated in their report which appears herein.

#### **Changes in Internal Control over Financial Reporting**

There has been no change in our internal control over financial reporting during the period covered by this Annual Report that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

#### **ITEM 16. [RESERVED]**

#### **ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT**

Our board of directors has determined that all four members of our audit committee, Mr. Ilan Flato, Mr. Rami Guzman, Mr. Yoav Chelouche and Ms. Iris Avner, are audit committee financial experts under applicable SEC rules and are independent as defined by NASDAQ Marketplace Rules.

#### **ITEM 16B. CODE OF ETHICS**

We adopted a code of ethics that applies to all directors, officers and employees of our Company and our subsidiaries, including our Chief Executive Officer, Chief Financial Officer, controller, and persons performing similar functions. We have posted our code of ethics on our website, [www.towersemi.com](http://www.towersemi.com) under "About Tower". The information contained on our website is not incorporated by reference in this annual report.

#### **ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

The following table presents fees for professional services rendered by our independent registered public accounting firm for audit services, audit-related services and tax services:

	<b>2019</b>	<b>2018</b>
	<b>(US dollars in Thousands)</b>	
Audit Fees (1)	805	809
Audit Related Fees (2)	28	31
Tax Fees (3)	8	18
	<u>841</u>	<u>858</u>

- (1) Audit Fees consist of fees for professional services rendered for the audit of our financial statements and our subsidiaries financial statements. Services in connection with statutory and regulatory filings and engagements (including audit of our internal control over financial reporting) and reviews of our interim financial results submitted on Form 6-K.
- (2) Audit-related fees consist of assurance and related services by the auditors including, among others: due diligence services, accounting consultations and audits in connection with acquisitions, attest services related to financial reporting that are not required by statute or regulation and consultation concerning financial accounting, consent letters for our SEC filings and reporting standards and out of pocket expenses reimbursement.
- (3) Tax fees consist of fees for tax compliance services and tax returns services.

**ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES.**

Not applicable.

**ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS.**

Not applicable.

**ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT**

Not applicable.

**ITEM 16G. CORPORATE GOVERNANCE**

As a foreign private issuer whose shares are listed on the NASDAQ Global Select Market, we are permitted to follow certain home country corporate governance practices instead of certain requirements of the Nasdaq Listing Rules. We have elected to follow the practices of our home country, rather than the Nasdaq Listing Rules, with respect to the following requirements:

- *Distribution of certain reports to shareholders.* As opposed to the Nasdaq Listing Rule 5250(d), which requires listed issuers to make annual reports available to shareholders in one of a number of specific manners, Israeli law does not require that we distribute annual reports, including our financial statements. As such, the generally accepted business practice in Israel is to distribute such reports to shareholders through a public regulated distribution website. In addition to making such reports available on a public regulated distribution website, we plan to make our audited financial statements available to our shareholders at our offices and will only mail such reports to shareholders upon request. As a foreign private issuer, we are generally exempt from the SEC's proxy solicitation rules.
- *Independent director meetings.* Our Board has not adopted a policy of conducting regularly scheduled meetings at which only our independent directors are present, as permitted by Israeli law. We do not follow the requirements of Nasdaq Listing Rule 5605(b)(2).
- *Compensation of officers.* We follow Israeli law and practice with respect to the approval of compensation for our chief executive officer and other executive officers. While our compensation committee currently complies with the provisions of the Nasdaq Listing Rules relating to composition requirements and Israeli law generally requires that the compensation of the chief executive officer and all other executive officers be approved, or recommended to the board for approval, by the compensation committee (with respect to the compensation of the chief executive officer and in certain other instances, shareholder approval is also required), Israeli law may differ from the provisions provided for in the Nasdaq Listing Rule 5605(d) (see Exhibit 2.1 to this Annual Report, "Description of Securities").

- *Director nomination process.* While our nominations committee currently complies with the provisions of the Nasdaq Listing Rules relating to composition requirements, the process under which director nominees are selected, or recommended for the Board of Directors selection, may not be in full compliance with the applicable Nasdaq Listing Rule 5605(e). Furthermore, although we have adopted a formal written nominations committee charter, there is no requirement under the Companies Law to do so and the charter as adopted may not be in full compliance with the requirements under Nasdaq Listing Rule 5605(e)(2).
- *Audit Committee Charter.* Although we have adopted a formal written audit committee charter, there is no requirement under the Companies Law to do so and the charter as adopted may not specify all the items enumerated in the Nasdaq Listing Rule 5605(c)(1).
- *Compensation Committee Charter.* Although we have adopted a formal written compensation committee charter, there is no requirement under the Companies Law to do so and the charter as adopted may not specify all the items enumerated in the Nasdaq Listing Rule 5605(d)(1).
- *Quorum requirements.* Under our articles of association and as permitted under the Companies Law, a quorum for any meeting of shareholders shall be the presence of at least two shareholders holding a combined 33% of our outstanding ordinary shares, instead of 33 1/3% of the issued share capital required under Nasdaq Listing Rule 5620(c). If the meeting was adjourned for lack of a quorum, if a quorum is not present at the adjourned meeting within half an hour of the time fixed for the commencement of the adjourned meeting, the shareholders present, in person or by proxy, shall constitute a quorum.
- *Related Party Transactions.* We review and approve all related party transactions in accordance with the requirements and procedures for approval of related party acts and transactions set forth in Sections 268 to 275 the Companies Law, which may not fully reflect the requirements of the Nasdaq Listing Rule 5630.
- *Shareholder Approval.* We seek shareholder approval for all corporate actions requiring such approval under the requirements of the Companies Law, rather than seeking approval for corporate actions in accordance with Nasdaq Listing Rule 5635. Under the Companies Law, shareholder approval is required (subject to certain limited exceptions) for, among other things: (a) transactions with directors concerning the terms of their service (including indemnification, exemption, and insurance for their service or for any other position that they may hold at a company), for which approvals of the compensation committee, board of directors, and shareholders are all required (subject to exceptions) (see Exhibit 2.1 to this Annual Report, “Description of Securities”); (b) extraordinary transactions with controlling shareholders of publicly held companies; (c) terms of office and employment or other engagement of a controlling shareholder, if any, or such controlling shareholder’s relative; (d) approval of transactions with the Company’s Chief Executive Officer with respect to his or her compensation, or transactions with officers of the Company not in accordance with the approved compensation policy (see Exhibit 2.1 to this Annual Report, “Description of Securities”); and (e) approval of the compensation policy of the Company for office holders (see “Item 6 Directors, Senior Management and Employees–B. Compensation”). In addition, under the Companies Law, a merger requires approval of the shareholders of each of the merging companies.

We do not necessarily seek shareholder approval for the establishment of, and amendments to, stock option or equity compensation plans (as set forth in Nasdaq Listing Rule 5635(c)), as such matters are not subject to shareholder approval under Israeli law. We will attempt to seek shareholder approval for our stock option or equity compensation plans (and the relevant annexes thereto) to the extent required in order to ensure they are tax qualified for our employees in the United States. However, even if such approval is not received, then the stock option or equity compensation plans will continue to be in effect, but the Company will be unable to grant options to its U.S. employees that qualify as Incentive Stock Options for U.S. federal tax purpose. Our stock option or other equity compensation plans are also available to our non-U.S. employees, and provide features necessary to comply with applicable non-U.S. tax laws.

Except as stated above, we currently intend to comply with the rules generally applicable to U.S. domestic companies listed on Nasdaq. We may in the future decide to use the foreign private issuer exemption with respect to some or all of the other Nasdaq Corporate Governance Requirements. Following our home country governance practices, as opposed to the requirements that would otherwise apply to a company listed on Nasdaq, may provide less protection than is accorded to investors under Nasdaq listing requirements applicable to domestic issuers. For more information, see “Item 3. “Key Information – D.Risk Factors-Risks Related to the Company - *As a foreign private issuer, we are permitted, to follow, and follow certain home country corporate governance practices instead of otherwise applicable Nasdaq requirements, which may result in less protection than is accorded to investors under rules applicable to domestic U.S. issuers.*”

**ITEM 16H. MINE SAFETY DISCLOSURE**

Not applicable.

**PART III**

**ITEM 17. FINANCIAL STATEMENTS**

Not applicable.

**ITEM 18. FINANCIAL STATEMENTS**

Our consolidated financial statements and related auditors’ report for the year ended December 31, 2019 are included in this Annual Report beginning on page F-1.

**ITEM 19. EXHIBITS**

1.1 [Articles of Association of the Company, approved by shareholders on November 14, 2000, as amended \(incorporated by reference to Exhibit 3.1 of the Company's Registration Statement on Form F-1, File No. 333-126909\).](#)

1.2 [Amendment to Articles of Association of the Company \(approved by shareholders on December 7, 2003\) \(incorporated by reference to Exhibit 4.2 to the Registration Statement on Form S-8, File No. 333-117565\).](#)

1.3 [Amendment to the Articles of Association of the Company \(approved by shareholders on September 28, 2006\) \(incorporated by reference to Exhibit 4.2 of the Company's Registration Statement on Form S-8, File No. 333-138837\).](#)

1.4 [Amendment to Articles of Association of Company \(approved by shareholders on September 24, 2008\) \(incorporated by reference to Exhibit 3.4 of the Company's Registration Statement on Form S-8, File No. 333-153710\).](#)

1.5 [Amendment to Articles of Association of Company \(approved by shareholders on August 11, 2011\) \(incorporated by reference to Exhibit 99.1 of the Form 6-K furnished to the SEC on January 17, 2012\).](#)

1.6 [Amendment to Articles of Association of Company \(approved by shareholders on August 2, 2012\) \(incorporated by reference to proposals 1 and 2 of the proxy statement filed on Form 6-K furnished to the SEC on June 12, 2012, and the Form 6-K furnished to the Securities and Exchange Commission on August 2, 2012\).](#)

1.7 [Amendment to Articles of Association of Company \(approved by shareholders on May 23, 2013\) \(incorporated by reference to Proposal 5 of the proxy statement furnished on Form 6-K to the Securities and Exchange Commission on April 16, 2013\).](#)

**#2.1 [Description of Securities Registered Under Section 12](#)**

4.1 [2013 Share Incentive Plan \(incorporated by reference to Exhibit 4.54 to the Company's Annual Report on Form 20-F filed with the Securities and Exchange Commission on May 14, 2015\).](#)

4.2 [Amended Compensation Policy of the Company \(incorporated by reference to Annex A to Exhibit 99.1 to the Form 6-K furnished to the Securities and Exchange Commission on May 25, 2017\).](#)

**#8.1 [List of Subsidiaries.](#)**

**#12.1 [Certification by Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.](#)**

**#12.2 [Certification by Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.](#)**

**#13.1 [Certification by Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.](#)**

**#13.2 [Certification by Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.](#)**

**#15.1 [Consent of Brightman Almagor Zohar & Co., Certified Public Accountants, a member of Deloitte Touche Tohmatsu.](#)**

#101 The following financial information from Tower Semiconductor Ltd.'s Annual Report on Form 20-F for the year ended December 31, 2019, formatted in XBRL (eXtensible Business Reporting Language):

- (i) Consolidated Balance Sheets as of December 31, 2019 and 2018;
- (ii) Consolidated Statements of Operations for the years ended December 31, 2019, 2018 and 2017;
- (iii) Consolidated Statements of Changes in Shareholders' Equity for the years ended December 31, 2019, 2018 and 2017;
- (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2019, 2018 and 2017; and
- (v) Notes to Consolidated Financial Statements, tagged as blocks of text.

Users of this data are advised, in accordance with Rule 406T of Regulation S-T promulgated by the SEC, that this Interactive Data File is deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, is deemed not filed for purposes of Section 18 of the Exchange Act, and otherwise is not subject to liability under these sections.

#Filed herewith

**SIGNATURES**

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this Annual Report on its behalf.

**TOWER SEMICONDUCTOR LTD.**

By: /s/ Russell C. Ellwanger

Russell C. Ellwanger  
Chief Executive Officer

April 30, 2020

**TOWER SEMICONDUCTOR LTD.  
AND SUBSIDIARIES**

**CONSOLIDATED FINANCIAL STATEMENTS  
AS OF DECEMBER 31, 2019**

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**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the shareholders and the Board of Directors of Tower Semiconductor Ltd.

**Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheets of Tower Semiconductor Ltd. and subsidiaries (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive income, shareholders' equity and cash flows, for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 2, 2020, expressed an unqualified opinion on the Company's internal control over financial reporting.

**Basis for Opinion**

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

**Critical Audit Matter**

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

**Income Taxes — Income Tax Provision — Refer to Note 19 to the financial statements****Critical Audit Matter Description**

The Company's provision for income taxes is affected by income taxes in Israel, the United States, and Japan. The income tax provision is an estimate determined based on management's understanding of current enacted tax laws and tax rates of each tax jurisdiction and the use of acceptable allocation methodologies (transfer pricing) to allocate taxable income between tax jurisdictions based upon the structure of the Company's operations and customer arrangements. The subsidiaries, which are semiconductors fabrications located outside Israel, are dependent on the allocation of production orders, managed centrally by the corporate global planning division, which directly affects the generation of income and local taxable income. For the year-ended December 31, 2019, the consolidated provision for income taxes was \$2.9 million comprised of amounts related to Israel, Japan and U.S. operations, as detailed in Note 19.

We identified management's determination of the taxable income and its related income tax provision as a critical audit matter because of the significant judgements and estimates management makes related to the taxable income allocation, the consideration of different tax status in each jurisdiction. This required a high degree of auditor judgement and an increased extent of effort, including the need to involve our income tax specialists, when performing audit procedures to evaluate the reasonableness of management's estimate of the income tax provision.

**How the Critical Audit Matter was addressed in the Audit**

Our audit procedures related to the determination of the taxable income allocation and income tax provision included the following, among others:

- We obtained the taxable income allocation used in calculating the income tax provision and tested that the taxable income allocation between Israel and corporate operations and the other subsidiaries is appropriate based on the specified services and margins determined in the Company's transfer pricing studies
- We tested the effectiveness of controls over the Company's process to allocate its taxable income between the different subsidiaries based on the Company's transfer pricing studies.
- We read and evaluated management's documentation, including information obtained by management from outside tax specialists that detailed the basis of the uncertain tax positions.
- With the assistance of our income tax specialists we evaluated:
  - The appropriateness of the ranges of outcomes utilized and the pricing conclusions reached within the transfer pricing studies conducted by the Company's outside tax specialists.

- The transfer pricing methodology utilized by management with alternative methodologies and industry benchmarks.
- The relevant facts by reading the Company's correspondence with the relevant tax authorities and any third-party advice obtained by the Company.
- The Company's measurement of uncertain tax positions related to transfer pricing based on our knowledge of international and local income tax laws, as well as historical settlement activity from income tax authorities

**Brightman Almagor Zohar & Co.**  
**Certified Public Accountants**  
**A Firm in The Deloitte Global Network**

Tel Aviv, Israel  
March 2, 2020

We have served as the Company's auditor since 1993.

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the shareholders and the Board of Directors of Tower Semiconductor Ltd.

**Opinion on Internal Control over Financial Reporting**

We have audited the internal control over financial reporting of Tower Semiconductor Ltd. and subsidiaries (the “Company”) as of December 31, 2019, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control — Integrated Framework (2013) issued by COSO. We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2019, of the Company and our report dated March 2, 2020, expressed an unqualified opinion on those consolidated financial statements.

**Basis for Opinion**

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financing Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

**Definition and Limitations of Internal Control over Financial Reporting**

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the consolidated financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of the consolidated financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the consolidated financial statements.

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

Brightman Almagor Zohar & Co.  
 Certified Public Accountants  
 A Firm in The Deloitte Global Network  
 Tel Aviv, Israel  
 March 2, 2020

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**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**  
(dollars and shares in thousands)

	As of December 31, 2019	As of December 31, 2018
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 355,561	\$ 385,091
Short-term interest-bearing deposits	215,609	120,079
Marketable securities	176,070	135,850
Trade accounts receivable	126,966	153,409
Inventories	192,256	170,778
Other current assets	22,019	22,752
<b>Total current assets</b>	<b>1,088,481</b>	<b>987,959</b>
<b>LONG-TERM INVESTMENTS</b>	<b>40,085</b>	<b>35,945</b>
<b>PROPERTY AND EQUIPMENT, NET</b>	<b>681,939</b>	<b>657,234</b>
<b>INTANGIBLE ASSETS, NET</b>	<b>10,281</b>	<b>13,435</b>
<b>GOODWILL</b>	<b>7,000</b>	<b>7,000</b>
<b>DEFERRED TAX AND OTHER LONG-TERM ASSETS, NET</b>	<b>105,047</b>	<b>88,404</b>
<b>TOTAL ASSETS</b>	<b>\$ 1,932,833</b>	<b>\$ 1,789,977</b>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Current maturities of long-term debt	\$ 65,932	\$ 10,814
Trade accounts payable	119,199	104,329
Deferred revenue and customers' advances	10,322	20,711
Employee related liabilities	50,302	50,750
Other current liabilities	7,301	17,117
<b>Total current liabilities</b>	<b>253,056</b>	<b>203,721</b>
<b>LONG-TERM DEBT</b>		
Debentures	94,552	120,170
Other long-term debt	151,269	136,499
<b>LONG-TERM CUSTOMERS' ADVANCES</b>	<b>28,196</b>	<b>28,131</b>
<b>EMPLOYEE RELATED LIABILITIES</b>	<b>13,285</b>	<b>13,898</b>
<b>DEFERRED TAX LIABILITY</b>	<b>45,238</b>	<b>50,401</b>
<b>OTHER LONG-TERM LIABILITIES</b>	<b>514</b>	<b>952</b>
<b>TOTAL LIABILITIES</b>	<b>586,110</b>	<b>553,772</b>
Ordinary shares of NIS 15 par value:	426,111	418,492
150,000 authorized as of December 31, 2019 and 2018		
106,895 and 106,808 issued and outstanding, respectively, as of December 31, 2019		
105,066 and 104,979 issued and outstanding, respectively, as of December 31, 2018		
Additional paid-in capital	1,395,376	1,380,396
Capital notes	--	20,758
Cumulative stock based compensation	107,774	93,226
Accumulated other comprehensive loss	(18,244)	(23,388)
Accumulated deficit	(547,398)	(637,446)
	<b>1,363,619</b>	<b>1,252,038</b>
Treasury stock, at cost - 87 shares	(9,072)	(9,072)
<b>THE COMPANY'S SHAREHOLDERS' EQUITY</b>	<b>1,354,547</b>	<b>1,242,966</b>
Non-controlling interest	(7,824)	(6,761)
<b>TOTAL SHAREHOLDERS' EQUITY</b>	<b>1,346,723</b>	<b>1,236,205</b>
<b>TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY</b>	<b>\$ 1,932,833</b>	<b>\$ 1,789,977</b>

See notes to consolidated financial statements.



**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**  
(dollars and shares in thousands, except per share data)

	Year ended December 31,		
	2019	2018	2017
<b>REVENUES</b>	\$ 1,234,003	\$ 1,304,034	\$ 1,387,310
<b>COST OF REVENUES</b>	<u>1,004,332</u>	<u>1,011,087</u>	<u>1,033,005</u>
<b>GROSS PROFIT</b>	<u>229,671</u>	<u>292,947</u>	<u>354,305</u>
<b>OPERATING COSTS AND EXPENSES:</b>			
Research and development	75,579	73,053	67,664
Marketing, general and administrative	<u>67,376</u>	<u>64,951</u>	<u>66,799</u>
	<u>142,955</u>	<u>138,004</u>	<u>134,463</u>
<b>OPERATING PROFIT</b>	86,716	154,943	219,842
<b>FINANCING INCOME (EXPENSE), NET</b>	12	(13,184)	(15,447)
<b>OTHER INCOME (EXPENSE), NET</b>	<u>4,293</u>	<u>(2,442)</u>	<u>(2,627)</u>
<b>PROFIT BEFORE INCOME TAX</b>	91,021	139,317	201,768
<b>INCOME TAX BENEFIT (EXPENSE), NET</b>	<u>(2,948)</u>	<u>(5,938)</u>	<u>99,888</u>
<b>NET PROFIT</b>	88,073	133,379	301,656
Net loss (income) attributable to non-controlling interest	<u>1,975</u>	<u>2,200</u>	<u>(3,645)</u>
<b>NET PROFIT ATTRIBUTABLE TO THE COMPANY</b>	<u>\$ 90,048</u>	<u>\$ 135,579</u>	<u>\$ 298,011</u>
<b>BASIC EARNINGS PER ORDINARY SHARE:</b>			
Earnings per share	<u>\$ 0.85</u>	<u>\$ 1.35</u>	<u>\$ 3.08</u>
Weighted average number of ordinary shares outstanding	<u>106,256</u>	<u>100,399</u>	<u>96,647</u>
<b>DILUTED EARNINGS PER ORDINARY SHARE:</b>			
Earnings per share	<u>\$ 0.84</u>	<u>\$ 1.32</u>	<u>\$ 2.90</u>
Net profit used for diluted earnings per share	<u>\$ 90,048</u>	<u>\$ 135,579</u>	<u>\$ 306,905</u>
Weighted average number of ordinary shares outstanding used for diluted earnings per share	<u>107,438</u>	<u>102,517</u>	<u>105,947</u>

See notes to consolidated financial statements.

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)**  
(dollars in thousands)

	Year ended December 31,		
	2019	2018	2017
<b>Net profit</b>	\$ 88,073	\$ 133,379	\$ 301,656
<b>Other comprehensive income (loss), net of tax:</b>			
Foreign currency translation adjustment	3,478	3,599	5,681
Change in employees plan assets and benefit obligations, net of taxes	(1,118)	269	511
Unrealized gain (loss) on derivatives	3,696	(2,704)	1,796
<b>Comprehensive income</b>	94,129	134,543	309,644
<b>Comprehensive loss (income) attributable to non-controlling interest</b>	1,063	407	(6,565)
<b>Comprehensive income attributable to the Company</b>	\$ 95,192	\$ 134,950	\$ 303,079

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY**  
(dollars and share data in thousands)

<b>THE COMPANY'S SHAREHOLDERS' EQUITY</b>												
	Ordinary shares issued	Ordinary shares amount	Additional paid-in capital	Capital notes	Unearned compensation	Accumulated other comprehensive income (loss)	Foreign currency translation adjustments	Accumulated deficit	Treasury stock	Comprehensive income	Non controlling interest	Total
<b>BALANCE AS OF JANUARY 1, 2017</b>	93,071	\$ 369,057	\$ 1,318,725	\$ 41,264	\$ 68,921	\$ (544)	\$ (27,283)	\$ (1,071,036)	\$ (9,072)		\$ (7,418)	\$ 682,614
<b>Changes during the period:</b>												
Issuance of shares	2,914	12,128	4,247									16,375
Conversion of debentures and exercise of warrants into share capital	--	--	--									--
Exercise of options	1,629	6,750	8,180									14,930
Capital notes converted into share capital	930	3,792	16,714	(20,506)								--
Employee stock-based compensation					11,644							11,644
Stock-based compensation related to the Facility Agreement with the Banks												--
Dividend to Panasonic											(5,501)	(5,501)
Other comprehensive income:												
Profit								298,011		\$ 298,011	3,645	301,656
Foreign currency translation adjustments							2,761			2,761	2,920	5,681
Change in employees plan assets and benefit obligations						511				511		511
Unrealized gain on derivatives						1,796				1,796		1,796
<b>Comprehensive income</b>										<u>\$ 303,079</u>		
<b>BALANCE AS OF DECEMBER 31, 2017</b>	98,544	\$ 391,727	\$ 1,347,866	\$ 20,758	\$ 80,565	\$ 1,763	\$ (24,522)	\$ (773,025)	\$ (9,072)		\$ (6,354)	\$ 1,029,706
<b>Changes during the period:</b>												
Conversion of notes into share capital	5,790	23,722	34,864									58,586
Exercise of options and RSUs	732	3,043	(2,334)									709
Employee stock-based compensation					12,661							12,661
Other comprehensive income:												
Profit								135,579		\$ 135,579	(2,200)	133,379
Foreign currency translation adjustments							1,806			1,806	1,793	3,599
Change in employees plan assets and benefit obligations						269				269		269
Unrealized loss on derivatives						(2,704)				(2,704)		(2,704)
<b>Comprehensive income</b>										<u>\$ 134,950</u>		
<b>BALANCE AS OF DECEMBER 31, 2018</b>	105,066	\$ 418,492	\$ 1,380,396	\$ 20,758	\$ 93,226	\$ (672)	\$ (22,716)	\$ (637,446)	\$ (9,072)		\$ (6,761)	\$ 1,236,205
<b>Changes during the period:</b>												
Exercise of options and RSUs	648	2,727	(886)									1,841
Capital notes converted into share capital	1,181	4,892	15,866	(20,758)								--
Employee stock-based compensation					14,548							14,548
Other comprehensive income:												
Profit								90,048		\$ 90,048	(1,975)	88,073

**THE COMPANY'S SHAREHOLDERS' EQUITY**

	<u>Ordinary shares issued</u>	<u>Ordinary shares amount</u>	<u>Additional paid-in capital</u>	<u>Capital notes</u>	<u>Unearned compensation</u>	<u>Accumulated other comprehensive income (loss)</u>	<u>Foreign currency translation adjustments</u>	<u>Accumulated deficit</u>	<u>Treasury stock</u>	<u>Comprehensive income</u>	<u>Non controlling interest</u>	<u>Total</u>
Foreign currency translation adjustments							2,566			2,566	912	3,478
Change in employees plan assets and benefit obligations						(1,118)				(1,118)		(1,118)
Unrealized gain on derivatives						3,696				3,696		3,696
Comprehensive income										<u>\$ 95,192</u>		
<b>BALANCE AS OF DECEMBER 31, 2019</b>	<u>106,895</u>	<u>\$ 426,111</u>	<u>\$ 1,395,376</u>	<u>\$ --</u>	<u>\$ 107,774</u>	<u>\$ 1,906</u>	<u>\$ (20,150)</u>	<u>\$ (547,398)</u>	<u>\$ (9,072)</u>		<u>\$ (7,824)</u>	<u>\$ 1,346,723</u>
<b>OUTSTANDING SHARES, NET OF TREASURY STOCK AS OF DECEMBER 31, 2019</b>	<u>106,808</u>											

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(dollars in thousands)

CASH FLOWS - OPERATING ACTIVITIES	Year ended December 31,		
	2019	2018	2017
Net profit	\$ 88,073	\$ 133,379	\$ 301,656
<b>Adjustments to reconcile net profit for the period to net cash provided by operating activities:</b>			
<b>Income and expense items not involving cash flows:</b>			
Depreciation and amortization	214,474	214,391	208,411
Effect of exchange rate differences on debentures	10,294	(9,791)	12,865
Other expense (income), net	(4,293)	2,442	2,627
<b>Changes in assets and liabilities:</b>			
Trade accounts receivable	27,317	(3,096)	(6,564)
Other current assets	(4,600)	11,260	(8,321)
Inventories	(21,021)	(26,344)	(4,277)
Trade accounts payable	(339)	(3,562)	(8,649)
Deferred revenue and customers' advances	(10,331)	2,625	(21,803)
Employee related liabilities and other current liabilities	(9,435)	(867)	(8,219)
Long-term employee related liabilities	(310)	(795)	(3,247)
Deferred tax, net and other long-term liabilities	1,491	(6,745)	(108,844)
Net cash provided by operating activities	291,320	312,897	355,635
<b>CASH FLOWS - INVESTING ACTIVITIES</b>			
Investments in property and equipment	(191,396)	(210,192)	(187,676)
Proceeds related to sale and disposal of property and equipment	19,230	40,451	20,038
Investment grants received	--	--	2,921
Investments in other assets	(413)	(14,536)	--
Deposits and marketable securities, net	(132,515)	(143,940)	(80,643)
Net cash used in investing activities	(305,094)	(328,217)	(245,360)
<b>CASH FLOWS - FINANCING ACTIVITIES</b>			
Exercise of warrants and options, net	1,842	714	31,315
Proceeds from loans	--	98,990	--
Loans repayment	--	(142,285)	(43,259)
Principal payments on account of capital lease obligation	(19,402)	(5,554)	(781)
Debentures repayment	--	--	(6,215)
Dividend paid to Panasonic	--	--	(4,378)
Net cash used in financing activities	(17,560)	(48,135)	(23,318)
EFFECT OF FOREIGN CURRENCY EXCHANGE RATE CHANGE	1,804	2,585	3,720
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(29,530)	(60,870)	90,677
CASH AND CASH EQUIVALENTS - BEGINNING OF PERIOD	385,091	445,961	355,284
CASH AND CASH EQUIVALENTS - END OF PERIOD	\$ 355,561	\$ 385,091	\$ 445,961

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(dollars in thousands)

	Year ended December 31,		
	2019	2018	2017
<b>NON-CASH ACTIVITIES:</b>			
Investments in property and equipment	\$ 39,184	\$ 28,052	\$ 28,419
Conversion of notes into share capital	\$ 22,600	\$ 58,586	\$ --
<b>SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:</b>			
Cash received during the period from interest	\$ 14,436	\$ 8,818	\$ 3,870
Cash paid during the period for interest	\$ 7,456	\$ 11,835	\$ 14,068
Cash paid during the period for income taxes, net	\$ 13,026	\$ 5,768	\$ 17,668

See notes to consolidated financial statements.

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**AS OF DECEMBER 31, 2019**  
(dollars in thousands, except per share data)

**NOTE 1 - DESCRIPTION OF BUSINESS AND GENERAL**

The consolidated financial statements of Tower Semiconductor Ltd. (“Tower”) include the financial statements of Tower, and (i) its wholly-owned subsidiary Tower US Holdings Inc., the sole owner of: (1) Jazz US Holdings Inc. and its wholly-owned subsidiary, Jazz Semiconductor, Inc., an independent semiconductor foundry focused on specialty process technologies for the manufacture of analog intensive mixed-signal semiconductor devices (Jazz US Holdings Inc. and Jazz Semiconductor, Inc. collectively referred to herein as “Jazz”); and (2) TowerJazz Texas Inc. (“TJT”); and (ii) its 51% owned subsidiary, TowerJazz Panasonic Semiconductor Co., Ltd. (“TPSCo”), an independent semiconductor foundry which includes three semiconductor manufacturing facilities located in Tonami, Uozu and Arai, in Hokuriku Japan. TPSCo’s other 49% shares are held by Panasonic Semiconductor Solution Co., Ltd (“PSCS”), a fully owned subsidiary of Panasonic Corporation as of December 31, 2019. On November 28, 2019, Panasonic Corporation announced it will sell PSCS to Nuvoton Technology Corporation, a Taiwan-based semiconductor company, which is an affiliate of Winbond Electronics Corporation, in a transaction that is targeted by Panasonic to close on June 2020. Tower and its subsidiaries are collectively referred to as the “Company”.

The Company is a global specialty foundry leader manufacturing integrated circuits, offering a broad range of customizable process technologies including: SiGe, BiCMOS, mixed-signal/CMOS, RF CMOS, CMOS image sensor, integrated power management and MEMS. The Company also provides a world-class design enablement platform for a quick and accurate design cycle, as well as Transfer Optimization and development Process Services (“TOPS”) to integrated device manufacturers (“IDMs”) and fabless companies that require capacity. To provide multi-fab sourcing and expanded capacity for its customers, the Company operates two manufacturing facilities in Israel (150mm and 200mm), two in the U.S. (200mm) and three in Japan through TPSCo (two 200mm and one 300mm), which provide 45nm CMOS, 65nm RF CMOS and 65nm advanced image sensor technologies.

Tower’s ordinary shares are traded on the NASDAQ Global Select Market and on the Tel-Aviv Stock Exchange (“TASE”) under the symbol TSEM.

The Company’s consolidated financial statements are presented in accordance with U.S. generally accepted accounting principles (“US GAAP”).

**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**A. Use of Estimates in Preparation of Financial Statements**

The preparation of financial statements in conformity with GAAP requires the Company to make estimates and assumptions that affect the reported amounts of assets and liabilities, affect the disclosure of contingent assets and liabilities as of the date of the financial statements, and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates.

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**AS OF DECEMBER 31, 2019**  
(dollars in thousands, except per share data)

**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)**

**B. Principles of Consolidation**

The Company's consolidated financial statements include the financial statements of Tower and its subsidiaries. The Company's consolidated financial statements are presented after elimination of inter-company transactions and balances.

**C. Cash and Cash Equivalents**

Cash and cash equivalents consist of cash, bank deposits and short-term investments with original maturities of three months or less.

**D. Short-Term Interest-Bearing Deposits**

Short-term deposits include bank deposits with original maturities greater than three months and less than one year. Such deposits presented at cost, including accrued interest, which approximates their fair value.

**E. Marketable securities**

The Company accounts for investments in debt securities in accordance with ASC 320 "*Investments - Debt and Equity Securities*". Management determines the appropriate classification of its investments in debt securities at the time of purchase and re-evaluates such determinations at each balance sheet date.

Marketable securities classified as "available-for-sale" are carried at fair value, based on quoted market prices. Unrealized gains and losses are reported in a separate component of shareholders' equity in accumulated other comprehensive income ("OCI"). Gains and losses are recognized when realized, on a specific identification basis, in the Company's consolidated statements of income.

The Company's securities are reviewed for impairment in accordance with ASC 320-10-35. If such assets are considered to be impaired, the impairment charge is recognized in earnings when a decline in the fair value of its investments below the cost basis is judged to be other-than-temporary. Factors considered in making such a determination include the duration and severity of the impairment, the reason for the decline in value, the potential recovery period and the Company's intent to sell, including whether it is more likely than not that the Company will be required to sell the investment before recovery of cost basis. For securities with an unrealized loss that the Company intends to sell, or it is more likely than not that the Company will be required to sell before recovery of their amortized cost basis, the entire difference between amortized cost and fair value is recognized in earnings.

For securities that do not meet these criteria, the amount of impairment recognized in earnings is limited to the amount related to credit losses, while declines in fair value related to other factors are recognized in OCI.

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**AS OF DECEMBER 31, 2019**  
(dollars in thousands, except per share data)

**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)**

**E. Marketable securities (Cont.)**

If quoted prices for identical instruments are available in an active market, marketable securities are classified within Level 1 of the fair value hierarchy. If quoted prices for identical instruments in active markets are not available, fair values are estimated using quoted prices of similar instruments and are classified within Level 2 of the fair value hierarchy.

**F. Trade Accounts Receivables - Allowance for Doubtful Accounts**

The Company maintains an allowance for doubtful accounts, based on specific analysis of the account receivable's aging, assessment of its related risk and ability of the customer to make the required payment.. As of December 31, 2019 and 2018, the allowance for doubtful accounts was \$10,925 and \$4,208, respectively, of which \$10,000 and \$3,000, respectively, relates to a customer located in the Far East region.

**G. Accounts Receivable Factoring**

From time to time, the Company uses non-recourse factoring arrangements, to sell accounts receivable to third-party financial institutions. The sale of the receivables in these arrangements are accounted for as a true sale, under ASC 860.

**H. Inventories**

Inventories are stated at the lower of aggregate cost or net realizable value. If inventory costs exceed expected net realizable value, the Company records reserves for the difference between the cost and the expected net realizable value. Cost of raw materials is determined mainly on the basis of the weighted average moving price per unit.

**I. Investments in Privately-Held Companies**

Long-term investments include equity investments in privately-held companies without readily determinable fair values. In accordance with ASC 321 - "*Investments - Equity Securities*", Company may elect between fair value and measurement alternative of cost, less impairments, and further adjust up or down, based on observable price changes in orderly transactions for identical or similar investments of the same issuer ("measurement alternative"). The Company elected to use the measurement alternative for each of its investments made through December 31, 2019. Any adjustments resulting from impairments and/or observable price changes are recorded as "other income (expense), net" in the consolidated statements of operations.

**J. Property and Equipment**

The Company accounts for property and equipment in accordance with Accounting Standards Codification ASC 360 "*Accounting for the Property, Plant and Equipment*". Property and equipment are presented at cost, including capitalizable costs. Capitalizable costs include only costs that are identifiable with, and related to the property and equipment and are incurred prior to their initial operation. Identifiable incremental direct costs include costs associated with constructing, establishing and installing property and equipment.

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**AS OF DECEMBER 31, 2019**  
(dollars in thousands, except per share data)

**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)**

**J. Property and Equipment (cont.)**

Maintenance and repairs are charged to expenses as incurred.

Property and equipment are presented net of investment grants received, and less accumulated depreciation.

Depreciation is calculated based on the straight-line method over the Company's estimated useful lives of the assets, as follows:

Buildings and building improvements, including facility infrastructure	10-25 years
Machinery and equipment, software and hardware	3-15 years

Impairment charges, if needed, are determined based on the policy outlined in L below.

Property and equipment includes also assets under capital leases and are depreciated according to their applicable useful life.

**K. Intangible Assets and Goodwill**

The Company accounts for intangible assets and goodwill in accordance with ASC 350 "Intangibles-Goodwill and Other". Intangible assets include the values assigned to the intangible assets as part of the purchase price allocation made at the time of acquisition.

Intangible assets are amortized over the expected estimated economic life of the intangible assets commonly used in the industry. Goodwill is not amortized and subject to impairment test. Impairment charges on intangibles or goodwill, if needed, are determined based on the policy outlined in L below.

**L. Impairment of Assets**

***Impairment of Property, Equipment and Intangible Assets***

The Company reviews long-lived assets and intangible assets on a periodic basis, as well as when such review is required based upon relevant circumstances, to determine whether events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable, considering the undiscounted cash flows expected from it. If applicable, the Company recognizes an impairment loss based upon the difference between the carrying amount and the fair value of such assets, in accordance with ASC 360-10 "Property, Plant and Equipment".

***Impairment of Goodwill***

The Company tests goodwill for impairment by performing a qualitative assessment process, or using a two-step quantitative assessment process. If the Company chooses to perform a qualitative assessment process and determines it is more likely than not (that is, a likelihood of more than 50 percent) that the carrying value of the net assets is more than the fair value of the reporting unit, the two-step quantitative assessment process is then performed; otherwise, no further testing is required. The Company may elect not to perform the qualitative assessment process and, instead, proceed directly to the two-step quantitative assessment process.

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**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)**

**L. Impairment of Assets (cont.)**

***Impairment of Goodwill (Cont.)***

The first step identifies potential impairment by comparing the fair value of a reporting unit with its carrying amount, including the goodwill. The fair value of the reporting units is determined using a discounted cash flow analysis (income approach). This fair value approach requires significant management judgment and estimations. The determination of fair value using a discounted cash flow analysis requires the use of key judgments, estimates and assumptions including revenue growth rates, projected operating margins, changes in working capital, terminal values, and discount rates. If the fair value exceeds the carrying amount of a reporting unit, goodwill is not considered impaired and the second step of the test is unnecessary. If the carrying amount exceeds the fair value of a reporting unit, the second step measures the impairment loss, if any.

The second step compares the implied fair value of goodwill with the carrying amount of that goodwill. The implied fair value of goodwill is determined in the same manner as the amount of goodwill recognized in a business combination. The implied fair value of the reporting unit's goodwill is calculated by creating a hypothetical balance sheet as if the reporting unit had just been acquired. This balance sheet contains all assets and liabilities recorded at fair value (including any intangible assets that may not have any corresponding carrying value in the balance sheet). The implied value of the reporting unit's goodwill is calculated by subtracting the fair value of the net assets from the fair value of the reporting unit. If the carrying amount of goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized in an amount equal to that excess.

**M. Leases**

In February 2016, the Financial Accounting Standards Board ("FASB") issued ASU No. 2016-02, "*Leases*" ("Topic 842"), which requires lessees to recognize a right-of-use ("ROU") asset and a lease liability for all operating and capital leases with a term greater than twelve months and also requires disclosures by lessees and lessors about the amount, timing and uncertainty of cash flows arising from leases. Subsequent to the issuance of Topic 842, the FASB clarified the guidance through several ASUs ("ASC 842").

On January 1, 2019, the Company adopted ASC 842 using the modified retrospective transition method. Results for the reporting period beginning January 1, 2019 are presented under ASC 842, while prior period amounts were not adjusted and continue to be reported in accordance with historical accounting under ASC 840, "*Leases*". Due to the adoption of ASC 842, as of December 31, 2019, operating lease ROU in the amount of approximately \$18,000 are recorded as assets and as operating lease liabilities. The aforementioned did not have any impact on the results of operations or cash flows.

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**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)**

**M. Leases (cont.)**

For all leases that commenced before the effective date of ASC 842, the permitted “practical expedients” as stipulated in the ASC was elected and accordingly, the Company did not reassess: (1) whether any expired or existing contracts contain leases; (2) the lease classification for any expired or existing leases; and (3) initial direct costs for any existing leases.

The determination if an arrangement is a lease is to be made at inception of a lease contract. ROU assets represent Company’s right to use an underlying asset for the lease term and lease liabilities represent Company’s obligation to make lease payments arising from the lease. ROU assets and lease liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. Whenever leases do not provide an implicit interest rate, incremental borrowing rate is used based on the information available at commencement date in determining the present value of lease payments. The lease terms used to calculate the ROU asset and related lease liability include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Lease expense for operating leases is recognized on a straight-line basis over the lease term as an operating expense. Certain lease agreements require payments for lease and non-lease components and the Company elected to account for these as a single lease component related to other operating facilities. For additional information, please see Notes 11D and 11E.

**N. Revenue Recognition**

ASC Topic 606 “*Revenue from Contracts with Customers*” (“Topic 606”), supersedes the previous revenue recognition guidance and industry-specific guidance under ASC Topic 605 “*Revenue Recognition*”. Topic 606 requires an entity to recognize revenue when it transfers the control of promised goods or services to customers in an amount that reflects the consideration the entity expects to be entitled to in exchange for those goods or services. The Company adopted Topic 606 on January 1, 2018, using the modified retrospective method applied to contracts that were not completed as of January 1, 2018.

Under the modified retrospective method, prior period financial positions and results are not adjusted. There was no transition adjustment to the company’s retained earnings upon adoption.

The Company’s revenues are generated principally from sales of semiconductor wafers. The Company, to a much lesser extent, also derives revenues from design support and other technical and support services incidental to the sale of semiconductor wafers. The vast majority of the Company’s sales are achieved through the effort of its direct sales force.

Wafer sales are recognized at a point in time, which is upon shipment or upon delivery of the Company’s products to unaffiliated customers, depending on shipping terms. Accordingly, control of the products transfers to the customer in accordance with the transaction’s shipping terms. Sales revenue is recognized for the amount of consideration that the Company expects to be entitled to in exchange for its products. Taxes imposed by governmental authorities, such as sales taxes or value-added taxes, are excluded from net sales. The Company’s contracts typically contain a single performance obligation that is fulfilled on the date of delivery based on shipping terms stipulated in the contract.

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**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)**

**N. Revenue Recognition (cont.)**

The Company provides 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, which has been in immaterial amounts.

The Company provides its customers with other services that are less significant in scope and amount and for which recognition is over time when customer receives the services.

**O. Research and Development**

Research and development costs are charged to operations as incurred. Amounts received or receivable from the government of Israel and others, as participation in research and development programs, are offset against research and development costs. The accrual for grants receivable is determined based on the terms of the programs, provided that the criteria for entitlement have been met.

**P. Income Taxes**

The Company accounts for income taxes using an asset and liability approach as prescribed in ASC 740-10 "*Income Taxes*" ("ASC 740-10"). 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. Deferred tax assets and liabilities, as well as any related valuation allowance, are classified as noncurrent in a classified statement of financial position.

The Company evaluates the potential realization of its deferred tax assets for each jurisdiction in which the Company operates at each reporting date and establishes valuation allowances when it is more likely than not that all or a part of its 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. The Company considers 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 the Company's deferred tax assets are not more-likely-than-not realizable, the Company establishes a valuation allowance, see Note 19.

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**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)**

**P. Income Taxes (cont.)**

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 the Company believes is more-likely-than-not realizable. Differences between the amount of tax benefits taken or expected to be taken in its income tax returns and the amount of tax benefits recognized in its financial statements, represent the Company's unrecognized income tax benefits. The Company's policy is to include interest and penalties related to unrecognized income tax benefits as a component of income tax expense.

**Q. Earnings per Ordinary Share**

Basic earnings per share are calculated in accordance with ASC 260, "*Earnings Per Share*" by dividing net profit or loss attributable to ordinary equity holders of Tower (the numerator) by the weighted average number of ordinary shares outstanding during the reported period (the denominator). Diluted earnings per share are calculated, if applicable, by adjusting net profit attributable to ordinary equity holders of Tower, and the weighted average number of ordinary shares, taking into effect all potential dilutive ordinary shares.

**R. Comprehensive Income**

In accordance with ASC 220 "*Comprehensive Income*", comprehensive income represents the change in shareholders' equity during a reporting period from transactions and other events and circumstances from non-owner sources. It includes all changes in equity during a reporting period except those resulting from investments by owners and distributions to owners. Other comprehensive income ("OCI") represents gains and losses that are included in comprehensive income but excluded from net profit.

**S. Functional Currency and Exchange Rate Income (Loss)**

The currency of the primary economic environment in which Tower, TJT and Jazz conduct their operations is the U.S. Dollar ("dollar"). Thus, the dollar is their functional and reporting currency. Accordingly, monetary accounts maintained in currencies other than the dollar are re-measured into dollars in accordance with ASC 830-10 "*Foreign Currency Matters*". All transaction gains and losses from the re-measurement of monetary balance sheet items are reflected in the statements of operations as financial income or expenses, as appropriate. The financial statements of TPSCo, whose functional currency is the Japanese Yen ("JPY"), have been translated into dollars. The assets and liabilities have been translated using the exchange rate in effect as of the balance sheet date.

The statements of operations of TPSCo has been translated using the average exchange rate for the reported period. The resulting translation adjustments are charged or credited to OCI.

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**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)**

**T. Stock-Based Compensation**

The Company applies the provisions of ASC Topic 718 "*Compensation - Stock Compensation*", under which employees' share-based equity awards (mostly restricted stock units and performance unit shares) are accounted for under the fair value method.

Accordingly, stock-based compensation granted to employees and directors is measured at the grant date, based on the fair value of the grant. The compensation costs are recognized using the graded vesting attribution method based on the vesting terms of each unit included in the award resulting in an accelerated recognition of compensation costs.

**U. Fair value of Financial Instruments and Fair Value Measurements**

ASC 820, "*Fair Value Measurements and Disclosures*" ("ASC 820"), requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. ASC 820 establishes a fair value hierarchy based on the level of independent, objective evidence surrounding the inputs used to measure fair value. A financial instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

ASC 820 prioritizes the inputs into three levels that may be used to measure fair value:

***Level 1***

Level 1 applies to assets or liabilities for which there are quoted prices in active markets for identical assets or liabilities.

***Level 2***

Level 2 applies to assets or liabilities for which there are inputs other than quoted prices that are observable for the asset or liability such as quoted prices for similar assets or liabilities in active markets; quoted prices for identical assets or liabilities in markets with insufficient volume or infrequent transactions (less active markets); or model-derived valuations in which significant inputs are observable or can be derived principally from, or corroborated by, observable market data.

***Level 3***

Level 3 applies to assets or liabilities for which there are unobservable inputs to the valuation methodology that are significant to the measurement of the fair value of the assets or liabilities.

The Company's financial instruments of cash, bank deposits, marketable securities, account receivable and payables, accrued liabilities, loans and leases approximate their current fair values because of their nature and respective maturity dates or durations. The Company had no financial assets or liabilities carried and measured on a non-recurring basis during the reporting periods. Financial assets and liabilities measured on a recurring basis are those that are adjusted to fair value each time a financial statement is prepared.

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**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)**

**V. Derivatives and hedging**

Derivative instruments are recognized as either assets or liabilities and are measured at fair value. The accounting for changes in the fair value of a derivative depends on the intended use of the derivative and the resulting designation.

For derivative instruments designated as fair value hedges, the gains (losses) are recognized in earnings in the periods of change together with the offsetting losses (gains) on the hedged items attributed to the risk being hedged.

For derivative instruments designated as cash flow hedges, the effective portion of the gains (losses) on the derivatives is initially reported as a component of OCI and is subsequently recognized in earnings when the hedged exposure is recognized in earnings. Gains (losses) on derivatives are recognized in earnings, representing either hedge components excluded from the assessment of effectiveness or hedge ineffectiveness.

For derivative instruments that are not designated as hedges, gains (losses) from changes in fair values are primarily recognized in the same line of the item economically hedged.

**W. Recently Issued Accounting Pronouncements**

In December 2019, the FASB issued ASU No. 2019-12, "*Income Taxes - Simplifying the Accounting for Income Taxes*" ("Topic 740"). The ASU simplifies the accounting for income taxes by removing certain exceptions to the general principles in Topic 740. The ASU also clarifies and amends existing guidance to improve consistent application among reporting entities. The guidance will be effective for fiscal years and interim periods within those fiscal years, beginning after December 15, 2020, with early adoption permitted. The Company is currently evaluating the impact of adopting this standard on its consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13 "*Fair Value Measurement*" Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement. This ASU removes certain disclosure requirements regarding the amounts and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy and the policy for timing of transfers between the levels. This ASU have no effect on the Company's disclosures or on the financial position, results of operations and cash flows.

In June 2018, the FASB issued ASU No. 2018-07 "*Compensation - Stock Compensation*" ("Topic 718"): Improvements to Nonemployee Share-Based Payment Accounting. This ASU expands the scope of Topic 718 to include accounting for share-based payments for acquiring goods and services from non-employees except for specific guidance on assumptions used in an option pricing model and expense attribution. Topic 718 is effective for periods beginning after December 15, 2018, with early adoption permitted. The Company does not have any stock-based instruments outstanding to non-employees. Accordingly, the adoption of this ASU has no effect on the Company's financial position, results of operations or cash flows.

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**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)**

**W. Recently Issued Accounting Pronouncements (Cont.)**

In January 2017, the FASB issued ASU 2017-04 “*Intangibles - Goodwill and Other: Simplifying the Test for Goodwill Impairment*” (“Topic 350”), which clarified its guidance to simplify the measurement of goodwill by eliminating the Step 2 impairment test. The new guidance requires companies to perform the goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. The amendment will be effective beginning in its first quarter of fiscal year 2020. The amendment is required to be adopted prospectively. Early adoption is permitted. The adoption of this guidance is not expected to have a significant impact on the Company’s consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13 “*Financial Instruments Credit Losses*”. This update requires a financial asset (or a group of financial assets) measured at amortized cost basis to be presented at the net amount expected to be collected. The measurement of expected credit losses is based on relevant information about past events, including historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. An entity must use judgment in determining the relevant information and estimation methods that are appropriate in its circumstances. The update is effective January 1, 2020, and for interim periods within that year. Early adoption is permitted only after January 1, 2019. The Company has previously incurred an immaterial amount of bad debt and expects no material impact on its consolidated financial statements and disclosures resulting from adopting this guidance.

**NOTE 3 - INVENTORIES**

Inventories consist of the following:

	As of December 31,	
	2019	2018
Raw materials	\$ 90,605	\$ 72,144
Work in process	91,537	92,047
Finished goods	10,114	6,587
	\$ 192,256	\$ 170,778

Work in process and finished goods are presented net of aggregate write-downs to net realizable value of \$649 and \$1,206 as of December 31, 2019 and 2018, respectively.

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**NOTE 4 - OTHER CURRENT ASSETS**

Other current assets consist of the following:

	As of December 31,	
	2019	2018
Tax receivables	\$ 8,156	\$ 3,997
Prepaid expenses	8,265	14,170
Accrued interest on bank deposits and other receivables	5,598	4,585
	<u>\$ 22,019</u>	<u>\$ 22,752</u>

**NOTE 5 - LONG-TERM INVESTMENTS**

Long-term investments consist of the following:

	As of December 31,	
	2019	2018
Severance-pay funds	\$ 11,860	\$ 13,615
Long-term bank deposit	12,500	12,500
Investments in privately- held companies	15,725	9,830
	<u>\$ 40,085</u>	<u>\$ 35,945</u>

**NOTE 6 - PROPERTY AND EQUIPMENT, NET**

Composition:

	As of December 31,	
	2019	2018
Original cost:		
Land and Buildings (including facility infrastructure)	\$ 363,133	\$ 347,798
Machinery and equipment (*)	2,684,980	2,482,609
	<u>\$ 3,048,113</u>	<u>\$ 2,830,407</u>
Accumulated depreciation:		
Buildings (including facility infrastructure)	\$ (239,241)	\$ (224,796)
Machinery and equipment	(2,126,933)	(1,948,377)
	<u>\$ (2,366,174)</u>	<u>\$ (2,173,173)</u>
	<u>\$ 681,939</u>	<u>\$ 657,234</u>

(\*) Original cost of machinery and equipment includes ROU assets under capital lease in the amount of \$86,087 and \$54,873 as of December 31, 2019 and 2018, respectively. The depreciation expense of such assets amounted to \$9,941 and \$2,102 for the years ended December 31, 2019 and 2018, respectively.

As of December 31, 2019 and 2018, the original cost of land, buildings, machinery and equipment was reflected net of investment grants in the aggregate amount of \$285,615 and \$285,636, respectively.

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**NOTE 7 - INTANGIBLE ASSETS, NET**

Intangible assets consist of the following as of December 31, 2019:

	Useful Life (years)	Cost	Accumulated Amortization	Net
Technologies	4;5;9	\$ 111,108	\$ (110,730)	\$ 378
Facilities lease	19	33,500	(24,241)	9,259
Trade name	9	7,702	(7,702)	--
Customer relationships	15	2,600	(1,956)	644
<b>Total identifiable intangible assets</b>		<b>\$ 154,910</b>	<b>\$ (144,629)</b>	<b>\$ 10,281</b>

Intangible assets consist of the following as of December 31, 2018:

	Useful Life (years)	Cost	Accumulated Amortization	Net
Technologies	4;5;9	\$ 110,835	\$ (108,888)	\$ 1,947
Facilities lease	19	33,500	(22,953)	10,547
Trade name	9	7,671	(7,547)	124
Customer relationships	15	2,600	(1,783)	817
<b>Total identifiable intangible assets</b>		<b>\$ 154,606</b>	<b>\$ (141,171)</b>	<b>\$ 13,435</b>

**NOTE 8 - DEFERRED TAX AND OTHER LONG-TERM ASSETS, NET**

Deferred tax and other long-term assets, net consist of the following:

	As of December 31,	
	2019	2018
Deferred tax asset (see Note 19)	\$ 66,362	\$ 73,460
Right of use - assets under operating leases	17,828	--
Prepaid long-term land lease, net	3,175	3,296
Fair value of cross currency interest rate swap (see Note 12D)	12,625	6,722
Long-term prepaid expenses and others	5,057	4,926
	<b>\$ 105,047</b>	<b>\$ 88,404</b>

**NOTE 9 - OTHER CURRENT LIABILITIES**

Other current liabilities consist of the following:

	As of December 31,	
	2019	2018
Tax payables	\$ 282	\$ 12,096
Interest payable	1,057	986
Others	5,962	4,035
	<b>\$ 7,301</b>	<b>\$ 17,117</b>

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**NOTE 10 - DEBENTURES**

**A. Composition by Repayment Schedule:**

	As of December 31, 2019					
	Interest rate	2020	2021	2022	2023	Total
Debentures Series G (see B below)	2.79%	\$ 38,690	\$ 38,690	\$ 38,690	\$ 19,347	\$ 135,417
Accretion of carrying amount to principal amount						(3,134)
Carrying amount						\$ 132,283

	As of December 31, 2018						
	Interest rate	2019	2020	2021	2022	2023	Total
Debentures Series G (see B below)	2.79%	\$ --	\$ 35,676	\$ 35,676	\$ 35,676	\$ 17,839	\$ 124,867
Accretion of carrying amount to principal amount							(4,697)
Carrying amount							\$ 120,170

**B. Debentures Series G**

In June 2016, Tower raised approximately \$115,000 through the issuance of long-term unsecured non-convertible debentures (“Series G Debentures”).

The Series G Debentures are payable in seven semi-annual consecutive equal installments from March 2020 to March 2023 and carrying an annual interest rate of 2.79%, payable semi-annually. The principal and interest amounts are denominated in NIS and are not linked to any index or to any other currency. The Company entered into hedging transactions to mitigate the foreign exchange rate differences on the principal and interest using a cross currency swap.

As of December 31, 2019 and 2018, the outstanding principal amount of Series G Debentures was NIS 468,000 (approximately \$135,000 and \$125,000 as of December 31, 2019 and December 31, 2018, respectively), with related hedging transactions net asset fair value of approximately \$16,000 and \$5,000, respectively. The changes in the fair value of outstanding principal amount of the debentures and in the fair value of the hedging transaction, are attributed to the corresponding changes in the exchange rates during the reported periods (see Note 12D). The Series G Debentures’ indenture includes customary financial and other terms and conditions, including a negative pledge and financial covenants. As of December 31, 2019, the Company was in compliance with all of the financial covenants under the indenture.

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**NOTE 11 - OTHER LONG-TERM DEBT**

**A. Composition:**

	As of December 31,	
	2019	2018
Long-term JPY bank loan - principal amount, see B and C below	\$ 101,365	\$ 100,118
Capital leases - see D below	60,277	47,195
Operating leases - see E below	17,828	--
Less - current maturities of long-term debt	(28,201)	(10,814)
	\$ 151,269	\$ 136,499

**B. Composition by Repayment Schedule of Loans:**

	Interest rate	As of December 31, 2019					
		2020	2021	2022	2023	2024 and on	Total
In JPY	1.95%	\$ --	\$ 22,526	\$ 22,526	\$ 22,526	\$ 33,787	\$101,365
Total outstanding principal		\$ --	\$ 22,526	\$ 22,526	\$ 22,526	\$ 33,787	\$101,365

  

	Interest rate	As of December 31, 2018					
		2019	2020	2021	2022	2023 and on	Total
In JPY	1.95%	\$ --	\$ --	\$ 22,248	\$ 22,248	\$ 55,622	\$100,118
Total outstanding principal		\$ --	\$ --	\$ 22,248	\$ 22,248	\$ 55,622	\$100,118

**C. Loans to TPSCo from Financial Institutions**

In June 2018, TPSCo refinanced its two then outstanding loans with 11 Billion JPY (approximately \$100,000) new asset-based loan agreements with a consortium of financial institutes comprised of JA Mitsui Leasing, Ltd., Sumitomo Mitsui Trust Bank, Limited (SMTB), Sumitomo Mitsui Banking Corporation (SMBC) and China trust Commercial Bank Corporation (CTBC) ("JP Loan"). The JP Loan carries a fixed interest rate of 1.95% per annum with principal payable in nine semiannual payments from 2021 and until 2025. The JP Loan is secured mainly by a lien over the machinery and equipment of TPSCo located in Uozu and Tonami manufacturing facilities. Outstanding principal amount was approximately \$101,000 as of December 31, 2019.

The JP Loan also contains certain financial ratios and covenants, as well as customary definitions of events of default and acceleration of the repayment schedule. TPSCo's obligations pursuant to the JP Loan are not guaranteed by Tower, Panasonic Corporation, PSCS, or any of its affiliates.

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**NOTE 11 - OTHER LONG-TERM DEBT (Cont.)**

**C. Loans to TPSCo from Japanese Financial Institutions (Cont.)**

As of December 31, 2019, TPSCo was in compliance with all of the financial ratios and covenants under this JP Loan.

**D. Capital Lease Agreements**

Certain of the Company's subsidiaries enter, from time to time, into capital lease agreements for certain machinery and equipment it operates in some of its fabrication facilities, usually for a period of four years, with an option to buy the machinery and equipment after a period of between three to four years from the start of the lease period. The lease agreements contain annual interest rate of up to 1.95% and the assets under the lease agreements are pledged to the lender until the time at which the respective subsidiary will buy the assets, if at all. The obligations under the capital lease agreement are guaranteed by Tower, except for TPSCo's obligations under its capital lease agreements.

As of December 31, 2019 and 2018, the outstanding capital lease liabilities for fixed assets was \$60,277 and \$47,195, respectively, of which \$21,070 and \$10,814 respectively, were included under current maturities of long-term debt.

The following presents the maturity of capital lease liabilities as of December 31, 2019:

Fiscal Year	
2020	\$ 21,070
2021	16,332
2022	14,386
2023	7,684
2024	805
Total	<u>\$ 60,277</u>

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**NOTE 11 - OTHER LONG-TERM DEBT (Cont.)**

**E. Operating Leases**

In 2019, the Company adopted ASU No. 2016-02, "Leases" (Topic 842). The Company enters from time to time into operating leases for office space, operating facilities and vehicles. Operating lease cost for the years ended December 31, 2019, 2018 and 2017 was \$8,045, \$8,773 and \$8,809, respectively. During 2019, cash paid for operating lease liabilities was \$8,113.

The following presents the composition of operating lease:

	Classification in Consolidated Balance Sheets	December 31, 2019
Right of use - assets under operating leases	Deferred tax and other long-term assets, net	\$ 17,828
Lease liabilities:		
Current operating leases liabilities	Current maturities of long-term debt	\$ 7,131
Long-term operating lease liabilities	Other long-term debt	10,697
<b>Total operating lease liabilities</b>		<b>\$ 17,828</b>
Weighted average remaining lease term (years)		4.9
Weighted average discount rate		1.95%

The following presents the maturity of operating lease liabilities as of December 31, 2019:

Fiscal Year	
2020	\$ 7,131
2021	6,304
2022	2,064
2023	645
2024	645
Thereafter	1,667
<b>Total</b>	<b>18,456</b>
Less – imputed interest	(628)
<b>Total</b>	<b>\$ 17,828</b>

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**NOTE 11 - OTHER LONG-TERM DEBT (Cont.)**

**F. Wells Fargo Credit Line**

In December 2013, Jazz entered into an agreement with Wells Fargo Capital Finance, part of Wells Fargo & Company (“Wells Fargo”), for a five-year secured asset-based revolving credit line in the total amount of up to \$70,000, maturing in December 2018.

In February 2018, Jazz and Wells Fargo signed an amendment to the credit line, under which the line is extended by five years, to mature in 2023, and the total amount remained at up to \$70,000 (the “Jazz Credit Line Agreement”). The applicable interest on the loans is at a rate equal to, at lender’s option, either the lender’s prime rate plus a margin ranging from 0.0% to 0.5% or the LIBOR rate plus a margin ranging from 1.25% to 1.75% per annum.

The outstanding borrowing availability varies from time to time based on the levels of Jazz’s eligible accounts receivable, eligible equipment, eligible inventories and other terms and conditions described in the Jazz Credit Line Agreement. The obligations of Jazz under the Jazz Credit Line Agreement are secured by a security interest on all the assets of Jazz. The Jazz Credit Line Agreement contains customary covenants and other terms, including customary events of default. If any event of default will occur, Wells Fargo may declare all borrowings under the facility due immediately and foreclose on the collateral. Jazz’s obligations pursuant to the Jazz Credit Line Agreement are not guaranteed by Tower or any of its affiliates.

As of December 31, 2019, Jazz was in compliance with all of the covenants under the Jazz Credit Line Agreement.

As of December 31, 2019, borrowing availability under the Jazz Credit Line Agreement was approximately \$70,000, of which approximately \$1,000 was utilized through letters of credit.

As of December 31, 2019 and 2018, no loan amounts were outstanding under the Jazz Credit Line Agreement.

**NOTE 12 - FINANCIAL INSTRUMENTS AND FAIR VALUE MEASUREMENTS**

The Company makes certain disclosures as detailed below with regard to financial instruments, including derivatives. These disclosures include, among other matters, the nature and terms of derivative transactions, information about significant concentrations of credit risk and the fair value of financial assets and liabilities.

**A. Non-Designated Exchange Rate Transactions**

As the functional currency of Tower is the USD and part of Tower's expenses are denominated in NIS, Tower enters from time to time into exchange rate agreements to protect against the volatility of future cash flows caused by changes in foreign exchange rates on NIS denominated expenses.

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**NOTE 12 - FINANCIAL INSTRUMENTS AND FAIR VALUE MEASUREMENTS (Cont.)**

**A. Non-Designated Exchange Rate Transactions (Cont.)**

As of December 31, 2019, the fair value amounts of such exchange rate agreements were \$167 in an asset position, presented in other current assets with a face value of \$48,000. As of December 31, 2018, the fair value amounts of such exchange rate agreements were \$379 in a liability position, presented in current liabilities with a face value of \$92,000.

Changes in the fair values of such derivatives are presented in cost of revenues in the statements of operations.

As the functional currency of TPSCo is the JPY and part of TPSCo revenues are denominated in USD, TPSCo enters from time to time into exchange rate agreements to protect against the volatility of future cash flows caused by changes in foreign exchange rates on USD denominated amounts. As of December 31, 2019 and 2018, the fair value amounts of such exchange rate agreements were \$318 and \$16, respectively, in a liability position, presented in other current liabilities with a face value of \$36,000 and \$42,000, respectively. Changes in the fair value of such derivatives are presented in the statements of operations.

**B. Concentration of Credit Risks**

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash and cash equivalents, bank deposits, marketable securities, derivative, trade receivables and government and other receivables. The Company's cash, deposits, marketable securities and derivative are maintained with large and reputable banks and investment banks. The composition and maturities of investments are regularly monitored by the Company. Generally, these securities may be redeemed upon demand and bear minimal risk.

The Company generally does not require collateral for insurance of receivables; however, in certain circumstances, the Company obtains credit insurance or may require advance payments. An allowance for doubtful accounts is determined with respect to those amounts the collection of which is determined to be doubtful. The Company performs ongoing credit evaluations of its customers.

**C. Fair Value of Financial Instruments**

The estimated fair values of the Company's financial instruments, excluding debentures do not materially differ from their respective carrying amounts as of December 31, 2019 and 2018. The fair value of debentures, based on quoted market prices as of December 31, 2019 and 2018, was approximately \$140,000 and \$127,000, respectively, compared to carrying amounts of approximately \$132,000 and \$120,000, for the above dates, respectively.

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**NOTE 12 - FINANCIAL INSTRUMENTS AND FAIR VALUE MEASUREMENTS (Cont.)**

**D. Cash Flow Hedge Gains (Losses)**

The Company entered into cash flow hedging transactions to mitigate the foreign exchange rate differences on principal and interest using a cross currency swap to mitigate the risk arising from Series G Debentures denomination in NIS.

As of December 31, 2019, the fair value of the swap was \$15,642 in an asset, net position, of which \$3,017 was presented in other current assets and \$12,625 was presented in long-term assets. As of December 31, 2018, the fair value of the swap was \$4,951 in an asset, net position, of which \$1,771 was presented in other current liabilities and \$6,722 was presented in long-term assets.

As of December 31, 2019 and December 31, 2018, the effective portions of \$1,504 and \$1,329, respectively, were recorded in OCI, of which a loss of \$719 is expected to be reclassified into earnings during the twelve months ending December 31, 2020. For the years ended December 31, 2019 and December 31, 2018, the hedging effect on the Company's results of operations was \$8,816 income and \$11,787 loss, respectively, and was recognized as financing expense, net, to offset the effect of the rate difference related to Series G Debentures.

**E. Fair Value Measurements**

**Valuation Techniques**

In general, and where applicable, the Company uses quoted prices in active markets for identical assets or liabilities to determine fair value. This pricing methodology applies to the Company's Level 1 assets and liabilities. If quoted prices in active markets for identical assets and liabilities are not available to determine fair value, the Company uses quoted prices for similar assets and liabilities or inputs other than the quoted prices that are observable, either directly or indirectly. This pricing methodology applies to the Company's Level 2 and Level 3 assets and liabilities.

**Level 1 Measurements**

Assets held for sale - securities classified as available for sale are reported at fair value on a recurring basis. These securities are classified as Level 1 of the valuation hierarchy where quoted market prices from reputable third-party brokers are available in an active market. Changes in fair value of securities available for sale are recorded in other comprehensive income.

**Level 2 Measurements**

If quoted market prices are not available, the Company obtains fair value measurements from an independent pricing service. These securities are reported using Level 2 inputs and the fair value measurements consider observable data that may include dealer quotes, market spreads, cash flows, U.S. government and agency yield curves, live trading levels, trade execution data, market consensus prepayment speeds, credit information, and the security's terms and conditions, among other factors.

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**NOTE 12 - FINANCIAL INSTRUMENTS AND FAIR VALUE MEASUREMENTS (Cont.)**

**E. Fair Value Measurements (Cont.)**

***Level 3 Measurements***

For cross currency swap measured under level 2 - the Company uses the market approach using quotations from banks and other public information.

Equity Securities without Readily Determinable Fair Values - Investments in privately-held companies are measured using the measurement alternatives, see Note 21 above. The Company reviews these investments for impairment and observable price changes on a quarterly basis, and adjusts the carrying value accordingly. For the year ended December 31, 2019, the Company recorded an increase of \$5,270 in the value of such investments, and for the year ended December 31, 2018, the Company recorded a decrease of \$5,000 in the value of such investments, presented in other income (expense), net in the statements of operations. The fair value of these investments represents a Level 3 valuation as the assumptions used in valuing these investments are not directly or indirectly observable.

Recurring fair value measurements using the indicated inputs:

	December 31, 2019	Quoted prices in active market for identical liability (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Cross currency swap - net asset position	\$ 15,642	\$ --	\$ 15,642	\$ --
Privately-held companies	15,725	--		15,725
Marketable securities held for sale	175,305	175,305	--	--
Foreign exchange forward and cylinders - liability position	(151)	--	(151)	--
	<u>\$ 206,521</u>	<u>\$ 175,305</u>	<u>\$ 15,491</u>	<u>\$ 15,725</u>

	December 31, 2018	Quoted prices in active market for identical liability (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Cross currency swap - net asset position	\$ 4,951	\$ --	\$ 4,951	\$ --
Privately-held companies	9,830	--		9,830
Marketable securities held for sale	135,227	135,227	--	--
Foreign exchange forward and cylinders - liability position	(395)	--	(395)	--
	<u>\$ 149,613</u>	<u>\$ 135,227</u>	<u>\$ 4,556</u>	<u>\$ 9,830</u>

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**NOTE 12 - FINANCIAL INSTRUMENTS AND FAIR VALUE MEASUREMENTS (Cont.)**

**F. Short-Term and Long-Term Deposits and Marketable Securities**

Short-term and long-term deposits and marketable securities as of December 31, 2019 included short term deposits in the amount of \$215,609, marketable securities in the amount of \$176,070 and a long-term bank deposit in the amount of \$12,500; as of December 31, 2018, short-term and long-term deposits and marketable securities included short term deposits in the amount of \$120,079, marketable securities in the amount of \$135,850 and a long-term bank deposit in the amount of \$12,500.

The following table summarizes amortized costs, gross unrealized gains and losses and estimated fair values of available-for-sale marketable securities as of December 31, 2019:

	Amortized cost (*)	Gross unrealized Gains	Gross Unrealized losses	Estimated fair value
Corporate bonds	\$ 154,167	\$ 1,273	\$ (214)	\$ 155,226
U.S government bonds	1,977	26	--	2,003
Non-U.S government bonds	992	11	--	1,003
Municipal bonds	1,208	21	--	1,229
Money market fund	15,225	366	--	15,591
Certificate of deposits	248	5	--	253
	<u>\$ 173,817</u>	<u>\$ 1,702</u>	<u>\$ (214)</u>	<u>\$ 175,305</u>

\* Excluding accrued interest of \$765.

The scheduled maturities of available-for-sale marketable securities as of December 31, 2019, were as follows:

	Amortized cost	Estimated fair value
Due within one year	\$ 37,845	\$ 37,818
Due after one year through five years	135,972	137,487
	<u>\$ 173,817</u>	<u>\$ 175,305</u>

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**NOTE 12 - FINANCIAL INSTRUMENTS AND FAIR VALUE MEASUREMENTS (Cont.)**

**F. Short-Term and Long-Term Deposits and Marketable Securities (Cont.)**

The following table summarizes amortized costs, gross unrealized gains and losses and estimated fair values of available-for-sale marketable securities as of December 31, 2018:

	Amortized cost (*)	Gross unrealized gains	Gross Unrealized losses	Estimated fair value
Corporate bonds	\$ 111,639	\$ 29	\$ (2,029)	\$ 109,639
U.S government bonds	5,444	21	--	5,465
Non-U.S government bonds	2,456	--	(33)	2,423
Municipal bonds	2,248	--	(13)	2,235
Money market fund	15,225	--	--	15,225
Certificate of deposits	248	--	(8)	240
	<u>\$ 137,260</u>	<u>\$ 50</u>	<u>\$ (2,083)</u>	<u>\$ 135,227</u>

\* Excluding accrued interest of \$623.

The scheduled maturities of available-for-sale marketable securities as of December 31, 2018, were as follows:

	Amortized cost	Estimated fair value
Due within one year	\$ 16,686	\$ 16,661
Due after one year through five years	120,574	118,566
	<u>\$ 137,260</u>	<u>\$ 135,227</u>

Investments with continuous unrealized losses for less than twelve months and twelve months or more and their related fair values as of December 31, 2019 and December 31, 2018, were as indicated in the following tables:

	December 31, 2019					
	Investment with continuous unrealized losses for less than twelve months		Investments with continuous unrealized losses for twelve months or greater		Total Investments with continuous unrealized losses	
	Fair value	Unrealized losses	Fair value	Unrealized losses	Fair value	Unrealized losses
Corporate bonds	\$ 8,562	\$ (56)	\$ 23,022	\$ (158)	\$ 31,584	\$ (214)
Non-U.S government bonds	--	--	--	--	--	--
Municipal bonds	--	--	--	--	--	--
Certificate of deposits	--	--	--	--	--	--
Total	<u>\$ 8,562</u>	<u>\$ (56)</u>	<u>\$ 23,022</u>	<u>\$ (158)</u>	<u>\$ 31,584</u>	<u>\$ (214)</u>

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
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**NOTE 12 - FINANCIAL INSTRUMENTS AND FAIR VALUE MEASUREMENTS (Cont.)**

**F. Short-Term and Long-Term Deposits and Marketable Securities (Cont.)**

	December 31, 2018					
	Investment with continuous unrealized losses for less than twelve months		Investments with continuous unrealized losses for twelve months or greater		Total Investments with continuous unrealized losses	
	Fair value	Unrealized losses	Fair value	Unrealized losses	Fair value	Unrealized losses
Corporate bonds	\$ 19,716	\$ (140)	\$ 79,609	\$ (1,889)	\$ 99,325	\$ (2,029)
Non-U.S government bonds	963	--	1,460	(33)	2,423	(33)
Municipal bonds	2,235	(13)	--	--	2,235	(13)
Certificate of deposits	--	--	240	(8)	240	(8)
<b>Total</b>	<b>\$ 22,914</b>	<b>\$ (153)</b>	<b>\$ 81,309</b>	<b>\$ (1,930)</b>	<b>\$ 104,223</b>	<b>\$ (2,083)</b>

**NOTE 13 - EMPLOYEE RELATED LIABILITIES**

**A. Employee Termination Benefits**

Israeli law, labor agreements and corporate policy determine the obligations of Tower to make severance payments to dismissed Israeli employees and to Israeli employees leaving employment under certain circumstances. Generally, the liability for severance pay benefits, as determined by Israeli law, is based upon length of service and the employee's monthly salary. This liability is primarily covered by regular deposits made each month by Tower into recognized severance and pension funds and by insurance policies maintained by Tower, based on the employee's salary for the relevant month. The amounts so funded and the liability are included on the balance sheets in long-term investments and employee related liabilities in the amounts of \$9,314 and \$11,638, respectively, as of December 31, 2019.

Commencing January 1, 2005, Tower implemented a labor agreement with regard to most of its Israeli employees, according to which monthly deposits into recognized severance and pension funds or insurance policies will release it from any additional severance obligation in excess of the balance in such accounts to such Israeli employees and, therefore, Tower incurs no liability or asset with respect to such severance obligations and deposits, since that date. Any net severance amount as of such date will be released on the employee's termination date. Payments relating to Israeli employee termination benefits were \$5,597, \$5,158 and \$5,059 for 2019, 2018 and 2017, respectively.

TPSCo established a Defined Contribution Retirement Plan (the "DC Plan") for its employees through which TPSCo contributes approximately 9% with employee average match of 1% from employee base salary to the DC Plan. Such contribution releases the employer from further obligation to any payments upon termination of employment. The contribution is remitted either to third party benefit funds based on employee preference, or directly, to those employees who elected not to enroll in the DC Plan. Total payments under the DC Plan in 2019, 2018 and 2017 amounted to \$6,572, \$6,700 and \$6,706, respectively.

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**NOTE 13 - EMPLOYEE RELATED LIABILITIES (Cont.)**

**B. Jazz Employee Benefit Plans**

The following information provides the changes in 2019, 2018 and 2017 periodic expenses and benefit obligations due to the bargaining agreement signed between Jazz with its collective bargaining unit employees.

**Post-Retirement Medical Plan**

The components of the net periodic benefit cost and other amounts recognized in other comprehensive income for post-retirement medical plan expense are as follows:

	Year ended December 31,		
	2019	2018	2017
<b>Net periodic benefit cost:</b>			
Service cost	\$ 7	\$ 10	\$ 9
Interest cost	72	73	69
Amortization of prior service costs	--	--	--
Amortization of net loss (gain)	(298)	(262)	(361)
Total net periodic benefit cost	<u>(219)</u>	<u>\$ (179)</u>	<u>\$ (283)</u>
<b>Other changes in plan assets and benefits obligations recognized in other comprehensive income:</b>			
Prior service cost for the period	\$ --	\$ --	\$ --
Net loss (gain) for the period	(1)	(376)	317
Amortization of prior service costs	--	--	--
Amortization of net gain (loss)	298	262	361
Total recognized in other comprehensive income (loss)	<u>\$ 297</u>	<u>\$ (114)</u>	<u>\$ 678</u>
Total recognized in net periodic benefit cost and other comprehensive income (loss)	<u>\$ 78</u>	<u>\$ (293)</u>	<u>\$ 395</u>
<b>Weighted average assumptions used:</b>			
Discount rate	4.50%	3.80%	4.50%
Expected return on plan assets	N/A	N/A	N/A
Rate of compensation increases	N/A	N/A	N/A
<b>Assumed health care cost trend rates:</b>			
Health care cost trend rate assumed for current year (Pre-65/Post-65 Medicare Advantage)	6.90%/13.10%	8.30%/11.10%	7.20%/10.00%
Health care cost trend rate assumed for current year (Pre-65/Post-65 Non Medicare Advantage)	6.90%/7.90%	N/A	N/A
Ultimate rate (Pre-65/Post-65)	4.50%/4.50%	4.50%/4.50%	4.50%/4.50%
Year the ultimate rate is reached (Pre-65/Post-65)	2029/2029	2027/2027	2025/2025
Measurement date	December 31, 2019	December 31, 2018	December 31, 2017

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**NOTE 13 - EMPLOYEE RELATED LIABILITIES (Cont.)**

**B. Jazz Employee Benefit Plans (Cont.)**

**Post-Retirement Medical Plan (Cont.)**

Impact of one-percentage point change in assumed health care cost trend rates as of December 31, 2019:

	Increase	Decrease
Effect on service cost and interest cost	\$ 2	\$ (2)
Effect on post-retirement benefit obligation	\$ 33	\$ (25)

The components of the change in benefit obligation, change in plan assets and funded status for post-retirement medical plan are as follows:

	Year ended December 31,		
	2019	2018	2017
<b>Change in medical plan related benefit obligation:</b>			
Medical plan related benefit obligation at beginning of period	\$ 1,628	\$ 1,936	\$ 1,550
Service cost	7	10	9
Interest cost	72	73	69
Benefits paid	(17)	(15)	(9)
Change in medical plan provisions	--	--	--
Actuarial loss (gain)	(1)	(376)	317
Benefit medical plan related obligation end of period	<u>\$ 1,689</u>	<u>\$ 1,628</u>	<u>\$ 1,936</u>
<b>Change in plan assets:</b>			
Fair value of plan assets at beginning of period	\$ --	\$ --	\$ --
Employer contribution	16	15	9
Benefits paid	(16)	(15)	(9)
Fair value of plan assets at end of period	<u>\$ --</u>	<u>\$ --</u>	<u>\$ --</u>
Medical plan related net funding	<u>\$ (1,689)</u>	<u>\$ (1,628)</u>	<u>\$ (1,936)</u>

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**NOTE 13 - EMPLOYEE RELATED LIABILITIES (Cont.)**

**B. Jazz Employee Benefit Plans (Cont.)**

**Post-Retirement Medical Plan (Cont.)**

	As of December 31,		
	2019	2018	2017
<b>Amounts recognized in statement of financial position:</b>			
Current liabilities	\$ (50)	\$ (65)	\$ (58)
Non-current liabilities	(1,639)	(1,563)	(1,878)
Net amount recognized	<u>\$ (1,689)</u>	<u>\$ (1,628)</u>	<u>\$ (1,936)</u>
<b>Weighted average assumptions used:</b>			
Discount rate	3.40%	4.50%	3.80%
Rate of compensation increases	N/A	N/A	N/A
<b>Assumed health care cost trend rates:</b>			
Health care cost trend rate assumed for next year (pre 65/ post 65 Medicare Advantage)	6.20%/(5.00)%	6.90%/13.10%	8.30%/11.10%
Health care cost trend rate assumed for next year (pre 65/ post 65 Non Medicare Advantage)	6.20%/6.10%	6.90%/7.90%	8.30%/11.10%
Ultimate rate (pre 65/ post 65)	4.50%/4.50%	4.50%/4.50%	4.50%/4.50%
Year the ultimate rate is reached (pre 65/ post 65)	2029/2029	2029/2029	2027/2027

The following benefit payments are expected to be paid in each of the next five fiscal years and in the aggregate for the five fiscal years thereafter:

Fiscal Year	Other Benefits
2020	\$ 50
2021	54
2022	54
2023	55
2024	61
2025-2029	\$ 365

**Jazz Pension Plan**

Jazz has a pension plan that provides for monthly pension payments to eligible employees upon retirement. The pension benefits are based on years of service and specified benefit amounts. Jazz uses a December 31 measurement date. Jazz's funding policy is to make contributions that satisfy at least the minimum required contribution for IRS qualified plans.

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**NOTE 13 - EMPLOYEE RELATED LIABILITIES (Cont.)**

**B. Jazz Employee Benefit Plans (Cont.)**

**Jazz Pension Plan (Cont.)**

The components of the change in benefit obligation, the change in plan assets and funded status for Jazz's pension plan are as follows:

	Year ended December 31,		
	2019	2018	2017
<b>Net periodic benefit cost:</b>			
Interest cost	\$ 817	\$ 749	\$ 831
Expected return on plan assets	(930)	(1,427)	(1,236)
Expected Administrative Expenses	100	--	--
Amortization of prior service costs	3	3	3
Amortization of net loss (gain)	--	--	55
<b>Total net periodic benefit cost</b>	<b>\$ (10)</b>	<b>\$ (675)</b>	<b>\$ (347)</b>
Other changes in plan assets and benefits obligations recognized in other comprehensive income:			
Prior service cost for the period	\$ --	\$ --	\$ --
Net loss (gain) for the period	1,158	(231)	(1,303)
Amortization of prior service costs	(3)	(3)	(3)
Amortization of net gain (loss)	--	--	(55)
<b>Total recognized in other comprehensive income (loss)</b>	<b>\$ 1,155</b>	<b>\$ (234)</b>	<b>\$ (1,361)</b>
<b>Total recognized in net periodic benefit cost and other comprehensive income (loss)</b>	<b>\$ 1,145</b>	<b>\$ (909)</b>	<b>\$ (1,708)</b>
<b>Weighted average assumptions used:</b>			
Discount rate	4.40%	3.70%	4.30%
Expected return on plan assets	4.20%	6.20%	6.20%
Rate of compensation increases	N/A	N/A	N/A

	Year ended December 31,		
	2019	2018	2017
<b>Estimated amounts that will be amortized from accumulated other comprehensive income in the next fiscal year ending :</b>			
Prior service cost	\$ 3	\$ 3	\$ 3
Net actuarial loss	\$ 27	\$ --	\$ --

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**NOTE 13 - EMPLOYEE RELATED LIABILITIES (Cont.)**

**B. Jazz Employee Benefit Plans (Cont.)**

**Jazz Pension Plan (Cont.)**

The components of the change in benefit obligation, change in plan assets and funded status for Jazz's pension plan are as follows:

	Year ended December 31,		
	2019	2018	2017
<b>Change in benefit obligation:</b>			
Benefit obligation at beginning of period	\$ 18,979	\$ 20,629	\$ 19,672
Interest cost	817	749	831
Benefits paid	(688)	(607)	(548)
Change in plan provisions	--	--	--
Actuarial loss (gain)	2,800	(1,792)	674
Benefit obligation end of period	<u>\$ 21,908</u>	<u>\$ 18,979</u>	<u>\$ 20,629</u>
<b>Change in plan assets:</b>			
Fair value of plan assets at beginning of period	\$ 22,669	\$ 23,235	\$ 19,871
Actual return on plan assets	2,544	(133)	3,212
Employer contribution	--	175	700
Expenses paid	(71)	--	--
Benefits paid	(688)	(607)	(548)
Fair value of plan assets at end of period	<u>\$ 24,454</u>	<u>\$ 22,670</u>	<u>\$ 23,235</u>
Funded status	<u>\$ 2,546</u>	<u>\$ 3,691</u>	<u>\$ 2,606</u>
<b>Amounts recognized in statement of financial position:</b>			
Non-current assets	\$ 2,546	\$ 3,691	\$ 2,606
Non-current liabilities	--	--	--
Net amount recognized	<u>\$ 2,546</u>	<u>\$ 3,691</u>	<u>\$ 2,606</u>
<b>Weighted average assumptions used:</b>			
Discount rate	3.20%	4.40%	3.70%
Rate of compensation increases	N/A	N/A	N/A

The following benefit payments are expected to be paid in each of the next five fiscal years and in the aggregate for the five fiscal years thereafter:

Fiscal Year	Other Benefits
2020	\$ 859
2021	932
2022	1,017
2023	1,085
2024	1,142
2025-2029	\$ 6,144

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**NOTE 13 - EMPLOYEE RELATED LIABILITIES (Cont.)**

**B. Jazz Employee Benefit Plans (Cont.)**

**Jazz Pension Plan (Cont.)**

The plan's assets measured at fair value on a recurring basis consisted of the following as of December 31, 2019:

	Level 1	Level 2	Level 3
Investments in mutual funds	\$ --	\$ 24,454	\$ --
Total plan assets at fair value	<u>\$ --</u>	<u>\$ 24,454</u>	<u>\$ --</u>

The plan's assets measured at fair value on a recurring basis consisted of the following as of December 31, 2018:

	Level 1	Level 2	Level 3
Investments in mutual funds	\$ --	\$ 22,670	\$ --
Total plan assets at fair value	<u>\$ --</u>	<u>\$ 22,670</u>	<u>\$ --</u>

Jazz's pension plan weighted average asset allocations on December 31, 2019, by asset category are as follows:

Asset Category	December 31, 2019	Target allocation 2020
Equity securities	23%	20%
Debt securities	77%	80%
Total	100%	100%

Jazz's primary policy goals regarding the plan's assets are cost-effective diversification of plan assets, competitive returns on investment and preservation of capital. Plan assets are currently invested in mutual funds with various debt and equity investment objectives. The target asset allocation for the plan assets is 80% debt, or fixed income securities, and 20% equity securities. Individual funds are evaluated periodically based on comparisons to benchmark indices and peer group funds and investment decisions are made by Jazz in accordance with the policy goals. Actual allocation to each asset category fluctuates and may not be within the target allocation specified above due to changes in market conditions.

The estimated expected return on assets of the plan is based on assumptions derived from, among other things, the historical return on assets of the plan, the current and expected investment allocation of assets held by the plan and the current and expected future rates of return in the debt and equity markets for investments held by the plan. The obligations under the plan could differ from the obligation currently recorded, if management's estimates are not consistent with actual investment performance.

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**NOTE 14 - COMMITMENTS AND CONTINGENCIES**

**A. Liens**

**(1) Loans, Bonds and Capital Leases**

For liens relating to Jazz Credit Line Agreement, see Note 11F. For liens under TPSCo 2018 JP Loan agreement, see Note 11C. For liens under the capital lease agreements, see Note 11D. For liens under Bond G indenture, see Note 10B.

**(2) Approved Enterprise Program**

Floating liens are registered in favor of the State of Israel on substantially all of Tower's assets under the Investment Center's approved enterprise status program.

**B. Renewed contract in relation to TPSCo**

In March 2019, the Company, PSCS and TPSCo, as applicable, signed three-year agreements renewing their previously signed 2014-2019 agreements, to be in effect from April 2019 for an additional 3 year period. Under the renewed agreements, among others, PSCS will continue to utilize TPSCo's three manufacturing facilities in Japan for its semiconductor business under a new pricing structure, which is resulting in lower annual and quarterly revenue commencing the second quarter of 2019, as compared to previous periods.

**C. License Agreements**

The Company enters into intellectual property and licensing agreements with third parties from time to time. The effect of each of them on the Company's total assets and results of operations is immaterial. Certain of these agreements call for royalties to be paid by the Company to these third parties.

**D. Lease Agreement**

Jazz leases its fabrication facilities under operational lease contracts that may be extended until 2027, through the exercise of an option at Jazz's sole discretion. In 2015, Jazz exercised its first 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. In the amendments to its leases, (i) Jazz secured various contractual safeguards designed to limit and mitigate any adverse impact of construction activities on its fabrication operations; and (ii) set forth certain obligations of Jazz and the landlord, including certain noise abatement actions at the fabrication facility. The landlord has made claims that Jazz's noise abatement efforts are not adequate under the terms of the amended lease. Jazz does not agree and is disputing these claims.

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**NOTE 14 - COMMITMENTS AND CONTINGENCIES (Cont.)**

**E. Environmental Affairs**

The Company's operations are subject to a variety of laws and state and governmental regulations relating to the use, discharge and disposal of toxic or otherwise hazardous materials used in the production processes. Operating permits and licenses are required for the operation of the Company's facilities and these permits and licenses are subject to revocation, modification and renewal. Government authorities have the power to enforce compliance with these regulations, permits and licenses. As of the approval date of the financial statements, the Company is not aware of any noncompliance with the terms of said permits and licenses.

**F. An engagement in relation to a new fabrication facility planned to be built in China**

In prior years, the Company, Nanjing Development Zone, Tacoma Technology Ltd. and Tacoma (Nanjing) Semiconductor Technology Co., Ltd. (collectively known as "Tacoma"), signed agreements regarding a new 8-inch fabrication facility planned to be established in Nanjing, China. According to the terms therein, it was agreed that the Company will provide technological expertise together with operational and integration consultation, at terms and milestones to be further agreed to by the parties and may invest in the project to be a minority stakeholder. To date, the Company received a total of \$27,000 (net of taxes) for technological licenses, consultation and other services it provided, of which \$18,000 (net of taxes) during 2017 and the remainder during 2019.

**G. Other Agreements**

The Company enters from time to time, in the ordinary course of business, into long-term agreements with various entities for the joint development of products and processes utilizing technologies owned separately by either the other entity or the Company, or owned jointly by both parties, as applicable.

**NOTE 15 - SHAREHOLDERS' EQUITY**

**A. Description of Ordinary Shares**

As of December 31, 2019, Tower had 150 million authorized ordinary shares, par value NIS 15.00 each, of which approximately 106.8 million were outstanding. Holders of ordinary shares are entitled to participate equally in the payment of cash dividends and bonus share (stock dividend) distributions and, in the event of the liquidation of Tower, in the distribution of assets after satisfaction of liabilities to creditors. Each ordinary share is entitled to one vote on all matters to be voted on by shareholders.

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**NOTE 15 - SHAREHOLDERS' EQUITY (Cont.)**

**B. Equity Incentive Plans**

**(1) General**

The Company has granted to its employees and directors options and Restricted Stock Units ("RSUs") to purchase ordinary shares under several share incentive plans adopted by the Company. The particular provisions of each plan and grant vary as to vesting period, exercise price, exercise period and other terms. Generally, (i) the exercise price of options will not be lower than the nominal value of the shares and will equal either

the closing market price of the ordinary shares immediately prior to the date of grant, or in relation to grants made from September 2013, an average of the closing price during the thirty trading days immediately prior to the date of grant; (ii) vesting is over a one to four year period according to defined vesting schedules, and for performance RSUs include financial performance targets; and (iii) options are not exercisable beyond seven or ten years from the grant date, as applicable.

Except for those share incentive plans described below, as of December 31, 2019 and December 31, 2018, respectively, there were approximately 25 thousand and 26 thousand, respectively, options outstanding under the Company's other share incentive plans (the "Old Plans"). No further options may be granted under the Old Plans.

**(2) Tower's 2013 Share Incentive Plan (the "2013 Plan")**

In 2013, the Company adopted a share incentive plan for directors, officers and employees of the Company which in 2019 was extended to include also third party service providers ("2013 Plan"). Options granted under the 2013 Plan bear an exercise price, which equals an average of the closing price during the thirty trading days immediately prior to the date of grant, vest over up to a three-year period and are not exercisable beyond seven years from the grant date.

Under the 2013 Plan, the Company granted, in 2019 and 2018, a total of 1.16 million and 0.98 million, respectively, of RSUs, to its employees and directors (including the below described grants to the CEO and Chairman), with vesting over up to a three-year period. The Company measures compensation expenses of the RSUs based on the closing market price of the ordinary shares immediately prior to the date of grant and amortizes it over the applicable vesting period taking in consideration compliance with performance criteria, if any.

In June 2019, the Company's shareholders approved the grant of the following RSUs to the Company's CEO and members of the Board of Directors under the 2013 Plan: (i) 129 thousand time vested RSUs and 129 thousand performance based RSUs to the CEO, which RSUs will vest linearly over a three-year period, 33% at the end of each year of the three years following the grant date, for a compensation value of \$3,900; (ii) 20 thousand time vested RSUs to the chairman of the Board of Directors ("the Chairman") for a total compensation value of \$300, to vest linearly over a three-year period, 33% at the end of each year of the three years following the grant date; and (iii) 5 thousand time vested RSUs to each of the 8 members of the Board of Directors (other than to the Chairman and the CEO), for an aggregate compensation value of \$600, vesting over a two-year period, with 50% vesting at the end of the first anniversary of the date of grant and 50% on the second anniversary of the date of grant.

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**NOTE 15 - SHAREHOLDERS' EQUITY (Cont.)**

**B. Equity Incentive Plans (Cont.)**

**(2) Tower's 2013 Share Incentive Plan (the "2013 Plan") (Cont.)**

In July 2018, the Company's shareholders approved the grant of the following RSUs to the Company's CEO and members of the Board of Directors under the 2013 Plan: (i) 107 thousand time vested RSUs and 72 thousand performance based RSUs to the CEO, which RSUs will vest linearly over a three-year period, 33% at the end of each year of the three years following the grant date, for a compensation value of \$3,900; and, in addition, 50 thousand performance based RSUs vesting over three years, with 65% vesting at the first anniversary of the grant, an additional 25% at the second anniversary and the remaining portion at the third anniversary for an additional compensation value of \$1,100; (ii) 14 thousand time vested RSUs to the Chairman for a total compensation value of \$300, to vest linearly over a three-year period, 33% at the end of each year of the three years following the grant date; and (iii) 3 thousand time vested RSUs to each of the 8 members of the Board of Directors (other than to the Chairman and the CEO), for an aggregate compensation value of \$600, vesting over a two-year period, with 50% vesting at the end of the first anniversary of the date of grant and 50% on the second anniversary of the date of grant.

In June 2017, the Company's shareholders approved the following equity awards to the Company's CEO, chairman of the Board and board directors under the 2013 Plan: (i) 85 thousand time vested RSUs and 97 thousand performance-based RSUs to the CEO, for a total compensation value of \$4,500; (ii) 12 thousand time vested RSUs to the chairman of the board of directors for a total compensation value of \$300; and (iii) 3 thousand time vested RSUs to each of the members of the board of directors (other than to the Chairman and the CEO), for a total compensation value of \$600.

As of December 31, 2019, approximately 318 thousand options and approximately 2.0 million RSUs were outstanding under the 2013 Plan. As of December 31, 2018, approximately 483 thousand options and approximately 1.6 million RSUs were outstanding under the 2013 Plan. Further grants may be approved subject to compensation committee, board of directors and shareholders' approval, as may be required by law.

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**NOTE 15 - SHAREHOLDERS' EQUITY (Cont.)**

**B. Equity Incentive Plans (Cont.)**

**(3) Summary of the Status of all the Company's Employees' and Directors' Share Incentive Plans**

**i. Share Options awards:**

	2019		2018		2017	
	Number of share options	Weighted average exercise price	Number of share options	Weighted average exercise price	Number of share options	Weighted average exercise price
Outstanding as of beginning of year	508,493	\$ 9.58	580,185	\$ 9.64	2,278,089	\$ 9.92
Granted	--		--		--	
Exercised	(163,375)	11.28	(70,271)	10.19	(1,611,489)	9.27
Terminated	(667)	9.90	(921)	9.82	(77,292)	25.89
Forfeited	(1,000)	4.42	(500)	4.42	(9,123)	8.06
Outstanding as of end of year	<u>343,451</u>	8.79	<u>508,493</u>	9.58	<u>580,185</u>	9.64
Options exercisable as of end of year	<u>343,451</u>	8.79	<u>485,579</u>	\$ 9.46	<u>459,662</u>	\$ 8.51

**ii. RSU awards:**

	2019		2018		2017	
	Number of RSU	Weighted Average Fair Value	Number of RSU	Weighted Average Fair Value	Number of RSU	Weighted Average Fair Value
Outstanding as of beginning of year	1,599,296	\$ 22.27	1,245,889	\$ 21.29	1,009,184	\$ 14.62
Granted	1,159,881	18.06	977,667	20.80	818,856	24.88
Converted	(484,665)	23.91	(602,423)	17.86	(553,241)	14.71
Forfeited	(260,899)	21.19	(21,837)	22.11	(28,910)	16.42
Outstanding as of end of year	<u>2,013,613</u>	\$ 19.13	<u>1,599,296</u>	\$ 22.27	<u>1,245,889</u>	\$ 21.29

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
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**NOTE 15 - SHAREHOLDERS' EQUITY (Cont.)**

**B. Equity Incentive Plans (Cont.)**

**(4) Summary of Information about Employees' Share Incentive Plans**

The following table summarizes information about employees' share options outstanding as of December 31, 2019:

Range of exercise prices	Outstanding			Exercisable	
	Number outstanding	Weighted average remaining contractual life (in years)	Weighted average exercise price	Number exercisable	Weighted average exercise price
\$ 4.42 - 17.25	343,451	1.78	\$ 8.79	343,451	\$ 8.79

	Year ended December 31,		
	2019	2018	2017
The intrinsic value of options exercised	\$ 1,824	\$ 1,416	\$ 26,031
The original fair value of options exercised	\$ 665	\$ 302	\$ 7,202

	Year ended December 31,		
	2019	2018	2017
The intrinsic value of converted RSUs	\$ 8,207	\$ 15,840	\$ 12,996
The original fair value of converted RSUs	\$ 11,588	\$ 10,761	\$ 8,138

Stock-based compensation expenses were recognized in the Statement of Operations as follows:

	Year ended December 31,		
	2019	2018	2017
Cost of goods	\$ 4,529	\$ 3,141	\$ 3,084
Research and development, net	2,900	2,533	2,555
Marketing, general and administrative	7,119	6,987	6,010
Total stock-based compensation expense	\$ 14,548	\$ 12,661	\$ 11,649

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**NOTE 15 - SHAREHOLDERS' EQUITY (Cont.)**

**C. Israeli Bank's Capital Notes**

During the first quarter of 2019, approximately 1.2 million ordinary shares were issued following the conversion of the last remaining capital notes. As a result, as of December 31, 2019 no capital notes were outstanding.

**D. Treasury Stock**

During 1999 and 1998, the Company funded the purchase by a trustee of an aggregate of approximately 87 thousand Tower's ordinary shares. These shares are classified as treasury shares.

**E. Dividend Restriction**

Tower is subject to limitations under Series G Debentures indenture, which enables distribution of dividends subject to satisfying certain financial ratios.

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**NOTE 16 - INFORMATION ON GEOGRAPHIC AREAS AND MAJOR CUSTOMERS**

**A. Revenues by Geographic Area - as Percentage of Total Revenue**

	Year ended December 31,		
	2019	2018	2017
USA	52%	52%	52%
Japan	29	34	32
Asia *	15	10	12
Europe	4	4	4
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

\* Represents revenues from individual countries of less than 10% each.

The basis of attributing revenues from external customers to geographic area is based on the headquarter location of the customer issuing the purchase order; actual delivery may be shipped to another geographic area per customer request.

**B. Long-Lived Assets by Geographic Area**

Substantially all of Tower's long-lived assets are located in Israel, substantially all of Jazz's and TJT's long-lived assets are located in the United States and substantially all of TPSCO's long-lived assets are located in Japan.

	As of December 31,	
	2019	2018
Israel	\$ 219,479	\$ 215,419
United States	248,453	239,462
Japan	214,007	202,353
<b>Total</b>	<b>\$ 681,939</b>	<b>\$ 657,234</b>

**C. Major Customers - as Percentage of Net Accounts Receivable Balance**

As of December 31, 2019, no customer exceeded 10% of the net accounts receivable balance. As of December 31, 2018, two customers exceeded 10% of the net accounts receivable balance and represented 13% and 10% of such balance.

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
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**NOTE 16 - INFORMATION ON GEOGRAPHIC AREAS AND MAJOR CUSTOMERS (Cont.)**

**D. Major Customers - as Percentage of Total Revenue**

	Year ended December 31,		
	2019	2018	2017
Customer A	27%	33%	30%
Customer B	5	7	12
Other customers *	27	16	15

\* Represents aggregated revenue to four customers accounted between 5% and 9% of revenue during 2019, to two customers accounted for 7% and 9% of revenue during 2018, and to two customers accounted for 7% and 8% of revenue during 2017.

**NOTE 17 - FINANCING EXPENSE (INCOME), NET**

Financing expense (income), net consists of the following:

	Year ended December 31,		
	2019	2018	2017
Interest expense	\$ 6,823	\$ 10,610	\$ 12,623
Interest income	(12,949)	(10,762)	(4,783)
Jazz Notes amortization	--	5,010	4,230
Series G Debentures amortization, related rate differences and hedging results	3,299	3,589	2,738
Exchange rate differences	968	1,064	6
Bank fees and others	1,847	3,673	633
	<u>\$ (12)</u>	<u>\$ 13,184</u>	<u>\$ 15,447</u>

**NOTE 18 - RELATED PARTIES BALANCES AND TRANSACTIONS**

**A. Balance:**

	<u>The nature of the relationship involved</u>	As of December 31,	
		2019	2018
Long-term investment	Equity investment in a limited partnership	\$ 55	\$ 110

**B. Transactions:**

	<u>Description of the transactions</u>	Year ended December 31,		
		2019	2018	2017
General and Administrative expense	Directors' fees and reimbursement to directors	\$ 783	\$ 736	\$ 719
Other income (expense), net	Non-controlling interest income (loss) from a limited Partnership	\$ (55)	\$ 44	\$ 29

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**NOTE 19 - INCOME TAXES**

**A. Tower Approved Enterprise Status and Statutory Income Rates**

Substantially all of Tower's existing facilities and other capital investments made through 2012 have been granted approved enterprise status, as provided by the Law for the Encouragement of Capital Investment ("Investments Law").

Tower, as an industrial company located in Migdal Ha'emek, may elect the Preferred Enterprise regime to apply to it under the Investment Law. The election is irrevocable. Under the Preferred Enterprise Regime, Tower's entire preferred income is subject to the tax rate of 7.5%.

Income not eligible for Preferred Enterprise benefits is taxed at the regular corporate tax rate of 23% for 2019, 23% for 2018 and 24% for 2017.

The Company operates in a multinational tax environment and is subject to tax treaty arrangements and transfer pricing guidelines for intercompany transactions. The Company is basing its positions on studies that are customary, acceptable and are in compliance with international tax rules in the jurisdictions the Company operates in.

**B. Income Tax Provision**

The Company's income tax provision is as follows:

	Year ended December 31,		
	2019	2018	2017
Current tax expense:			
Local	--	\$ 2,164	\$ 3,622
Foreign (*)	1,013	9,273	6,070
Deferred tax expense (benefit):			
Local (see F below)	7,098	9,316	(82,370)
Foreign(*) (see E below)	(5,163)	(14,815)	(27,210)
Income tax expense (benefit)	<u>\$ 2,948</u>	<u>\$ 5,938</u>	<u>\$ (99,888)</u>
	Year ended December 31,		
	2019	2018	2017
Profit (loss) before taxes:			
Domestic	\$ 103,432	\$ 142,831	\$ 198,008
Foreign (*)	(12,411)	(3,514)	3,760
Total profit before taxes	<u>\$ 91,021</u>	<u>\$ 139,317</u>	<u>\$ 201,768</u>

(\*) Foreign are amounts related to Tower's Japanese and US subsidiaries.

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**NOTE 19 - INCOME TAXES (Cont.)**

**C. Components of Deferred Tax Asset/Liability**

The following is a summary of the components of the deferred tax assets and liabilities reflected in the balance sheets as of the respective dates (\*)

	As of December 31,	
	2019	2018
Deferred tax asset and liability - long-term:		
Deferred tax assets:		
Net operating loss carryforward	\$ 78,783	\$ 87,325
Employees benefits and compensation	4,819	4,914
Accruals and reserves	3,341	4,738
Research and development	15,276	12,292
Others	5,068	3,615
	107,287	112,884
Valuation allowance, see F below	(7,266)	(5,834)
Deferred tax assets	\$ 100,021	\$ 107,050
Deferred tax liabilities- long-term:		
Depreciation and amortization	(77,966)	(82,001)
Gain on TPSCo acquisition	--	(1,240)
Others	(931)	(750)
Deferred tax liabilities	\$ (78,897)	\$ (83,991)
Presented in long term deferred tax assets	\$ 66,362	\$ 73,460
Presented in long term deferred tax liabilities	\$ (45,238)	\$ (50,401)

(\*) Deferred tax assets and liabilities relating to Tower for the years 2019 and 2018 are computed based on the Israeli preferred enterprise tax rate of 7.5%.

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**NOTE 19 - INCOME TAXES (Cont.)**

**D. Unrecognized Tax Benefit**

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	Unrecognized tax benefits
Balance at January 1, 2019	\$ 14,783
Additions for tax positions of current year	778
Reduction due to statute of limitation of prior years	(448)
Balance at December 31, 2019	<u>\$ 15,113</u>
	Unrecognized tax benefits
Balance at January 1, 2018	\$ 15,286
Additions for tax positions of current year	716
Reduction due to statute of limitation of prior years	(1,219)
Balance at December 31, 2018	<u>\$ 14,783</u>
	Unrecognized tax benefits
Balance at January 1, 2017	\$ 8,969
Additions for tax positions	8,753
Reduction of prior years' provision	(2,436)
Balance at December 31, 2017	<u>\$ 15,286</u>

**E. Effective Income Tax Rates**

In December 2017, the Tax Cut and Jobs Act (the "Act") was signed into law, which enacts significant changes to U.S. federal corporate tax and related laws. Some of the provisions of the Act affecting corporations include, but are not limited to: (i) a reduction of the U.S. Federal corporate income tax rate from 35% to 21%; (ii) limiting the interest expense deduction; (iii) expensing of cost of acquired qualified property; (iv) elimination of the domestic production activities deduction; (v) elimination of Alternative Minimum Tax ("AMT") and (vi) refund ability of AMT credits, which were generated prior to the Act, in 2018 and thereafter.

Tower US Holdings recorded in the twelve months ended December 31, 2017 a non-cash income tax benefit in the amount of approximately \$13,000 for Act-related impacts.

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**NOTE 19 - INCOME TAXES (Cont.)**

**E. Effective Income Tax Rates (Cont.)**

The reconciliation of the statutory tax rate to the effective tax rate is as follows:

	Year ended December 31,		
	2019	2018	2017
Tax expense computed at statutory rates, see (*) below	\$ 20,935	\$ 32,044	\$ 48,433
Effect of tax rate change on deferred tax liabilities, net (**)	314	(478)	(16,078)
Effect of different tax rates in different jurisdictions and Preferred Enterprise Benefit	(16,396)	(23,150)	(33,298)
Change in Valuation allowance, see F below		(962)	(82,772)
Tax benefits for which deferred taxes were not recorded, see F below	--	--	(15,103)
Permanent differences and other, net	(1,905)	(1,516)	(1,070)
<b>Income tax expense (benefit)</b>	<b>\$ 2,948</b>	<b>\$ 5,938</b>	<b>\$ (99,888)</b>

(\*) The tax expense (benefit) was computed based on Tower's regular corporate tax rate of 23% for 2019, 23% for 2018 and 24% for 2017.

(\*\*) Reduction in tax rates due to the U.S. Tax Reform and reduction in income tax rates in Japan.

**F. Net Operating Loss Carryforward**

As of December 31, 2019, Tower had net operating loss carryforward for tax purposes of approximately \$1,000,000 which may be carried forward indefinitely. For the year ended December 31, 2016, Tower recorded a valuation allowance for deferred tax assets as it was unable to conclude that it is more-likely-than-not that such deferred tax assets would be realized. As of December 31, 2017, Tower concluded that realization of net deferred assets is more likely than not as required by ASC 740-10-30-5(e). Tower considered both positive and negative factors. Positive factors include the Israeli accumulated profit before tax for 2017 and recent years, projections for taxable income in Israel in the near term and the unlimited time for the utilization of the losses carryforward. The negative factors considered include Tower's history of operating losses, the uncertainty in estimating the future generation of sufficient taxable income in Israel to utilize the loss carryforward in the amount noted above taking into account that it operates in the cyclical industry of semiconductors and other trends affecting Tower's ability to sustain its current level of income. Weighing all the above, Tower concluded in 2017 that it is more likely than not that taxable income will be generated and released entirely the valuation allowance related to the Israeli accumulated losses.

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**NOTE 19 - INCOME TAXES (Cont.)**

**F. Net Operating Loss Carryforward (Cont.)**

The future utilization of Tower US Holdings' federal net operating loss carryforward to offset future federal taxable income is subject to an annual limitation as a result of ownership changes that have occurred. Additional limitations could apply if ownership changes occur in the future. Jazz has had two "change in ownership" events that limit the utilization of net operating loss carryforward. The first "change in ownership" event occurred in February 2007 upon Jazz Technologies' acquisition of Jazz Semiconductor. The second "change in ownership" event occurred in September 2008, upon Tower's acquisition of Jazz. Jazz concluded that the net operating loss limitation for the change in ownership which occurred in September 2008 will be an annual utilization of approximately \$ 2,100 in its tax return.

As of December 31, 2019, Tower US Holdings had federal net operating loss carryforward of approximately \$31,000, of which approximately \$5,000 do not expire and is subject to taxable income limitation of 80% due to the Act, and the remaining federal tax loss carryforwards of \$26,000 will begin to expire in 2022, unless previously utilized.

As of December 31, 2019, Tower US Holdings had California state net operating loss carryforward of approximately \$11,000. The state tax loss carry forward begin to expire in 2028, unless previously utilized.

As of December 31, 2019 and 2018, TPSCo had no net operating loss carryforward.

**G. Final Tax Assessments**

Tower possesses final tax assessments through the year 1998. In addition, the tax assessments for the years 1999-2014 are deemed final.

Tower US Holdings is filing the consolidated tax return including Jazz and TJT. Tower US Holdings and its subsidiaries are subject to U.S. federal income tax as well as income tax in multiple states.

With few exceptions, Tower US Holdings is no longer subject to U.S. federal income tax examinations before 2016 and state and local income tax examinations before 2015. However, to the extent allowed by law, the tax authorities may have the right to examine prior periods where net operating losses were generated and carried forward, and make adjustments up to the amount of the net operating loss carryforward amount.

TPSCo possesses final tax assessments through the year 2016.

## DESCRIPTION OF SECURITIES

The descriptions of the securities contained herein summarize the material terms and provisions of the ordinary shares of Tower Semiconductor Ltd. (the “**Company**”), registered under Section 12 of the Securities Exchange Act of 1934.

### **General**

Our authorized and registered share capital is NIS 2,250,000,000 (two billion two hundred and fifty million) divided into 150,000,000 (one hundred and fifty million) ordinary shares, nominal (par) value NIS 15.00 each.

### **The Nasdaq Global Select Market**

Our ordinary shares are listed on The Nasdaq Global Select Market the symbol “TSEM”.

### **Memorandum and Articles of Association**

#### ***Registration Number and Purposes***

Our registration number with the Israeli Companies Registrar is 520041997. Pursuant to Section 4 of our Articles of Association (“Articles”), the Company’s objective is to engage in any lawful activity.

#### ***Election of Directors***

Our ordinary shares do not have cumulative voting rights for the election of directors. Our directors are elected by the general meeting of our shareholders by the vote of a majority of the ordinary shares present, in person or by proxy, and voting at that meeting. Generally, our directors hold office until their successors are elected at the next annual general meeting of shareholders (or until any of their earlier resignation or removal in accordance with the Companies Law). In addition, our Articles of association allow our board of directors to appoint directors (other than the external directors) to fill vacancies on our board of directors, until the next annual general meeting of shareholders.

#### ***Borrowing Powers***

Our Board of Directors may, from time to time, at its discretion, approve the receipt of credit by the Company in any amount and the discharge thereof, in such manner as it deems fit, as well as the award of collateral to secure any such credit, of whatsoever type. The Board of Directors may, from time to time, at its discretion, approve the issue of a series of debentures, including capital notes or bonds, and including debentures, capital notes or bonds convertible or exercisable into shares, and determine the terms thereof, and to charge all or any of the Company’s present or future property by way of a floating or fixed charge. In accordance with the Articles, debentures, capital notes, bonds or other securities, as aforesaid, may be issued at a discount, with a premium or in any other manner, with deferred rights, special rights, privileges or other rights, all as determined by the board of directors at its discretion.

#### ***Rights Attached to Shares; Dividend and Liquidation Rights***

Holders of the Company’s ordinary shares have one vote per share, and are entitled to participate equally in the payment of dividends and share distributions and, in the event of liquidation of the Company, in the distribution of assets after satisfaction of liabilities to creditors. No preferred shares are currently authorized.

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Under the Companies Law, dividend distributions are determined by the board of directors and do not require the approval of the shareholders of a company unless the company's articles of association provide otherwise. Our articles do not require shareholder approval of a dividend distribution and provide that dividend distributions may be determined by our board of directors. The distribution amount is limited to the greater of retained earnings or earnings generated over the two most recent years legally available for distribution according to our then last reviewed or audited financial statements (less the amount of previously distributed dividends, if not reduced from the earnings), provided that the date of the financial statements is not more than six months prior to the date of distribution. If we do not meet such criteria, we must seek the approval of the court in order to distribute a dividend. In each case, we are only permitted to distribute a dividend if our board of directors or the court, if applicable, determines that there is no reasonable concern that payment of the dividend will prevent us from satisfying our existing and foreseeable obligations as they become due.

### ***Modification of Class Rights***

Pursuant to our Articles, at any time the share capital is divided into different classes of shares, the Company may, in a resolution passed at the general meeting by an ordinary majority, convert, expand, add to, reduce or otherwise alter the rights attached to a particular class of shares, provided that the written agreement of all the holders of the shares of such class is received or that the resolution is approved at a general meeting of the holders of the shares of such class by an ordinary majority, or as otherwise provided in the issue terms of the particular class.

### ***Shareholder Meetings***

Under Israeli law and our Articles, we are required to hold an annual general meeting of shareholders each year that must be held no later than 15 months from the last annual meeting, upon at least 21 days' prior notice to our shareholders.

A special meeting may be convened by the Board of Directors, at such times as it deems fit, and it is required to convene a special meeting at the request of (i) any two directors or twenty-five percent of the board members or (ii) one or more shareholders holding at least 5% of our issued share capital and 1% of the voting rights or one or more shareholders holding at least 5% of the voting rights. Shareholders requesting a special meeting must submit their proposed resolution with their request. Within 21 days of receipt of the request, the Board of Directors must convene a special meeting and provide notice for the meeting setting forth the date, time and place of the meeting, which generally shall not be convened more than 35 days after the notice for the meeting. If the special meeting is not convened by the Board of Directors as set forth above, the person who requested the Board to convene the meeting may convene the meeting, in the same manner a special meeting is convened by the Board of Directors, provided that such meeting shall not be held after three months have elapsed from the date the request was submitted.

Pursuant to the Companies and our Articles, resolutions regarding the following matters are required to be approved by our shareholders at a general meeting by an ordinary resolution.

- amendments to our Articles;
  - appointment, terms of engagement and termination of engagement of our independent auditors;
  - appointment and dismissal of directors;
  - approval of certain related party transactions and certain officer and director compensation;
  - increase or reduction of authorized share capital in accordance with the provisions of the Companies Law or the rights of shareholders or a class of shareholders;
  - any merger as provided in Section 320(a) of the Companies Law; and
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- the exercise of the Board of Directors' powers by the general meeting, if the Board of Directors is unable to exercise its powers and the exercise of any of its powers is essential for Tower's proper management, as provided in section 52(a) of the Companies Law.

Subject to the provisions of the Companies Law and regulations promulgated thereunder, shareholders entitled to participate and vote at general meetings are the shareholders of record on a date to be decided by the board of directors, which, as a company listed on an exchange outside Israel, may be between four and 40 days prior to the date of the meeting.

The Companies Law requires that a notice of any annual general meeting or special general meeting be provided to shareholders at least 21 days prior to the meeting and if the agenda of the meeting includes, among other things, the appointment or removal of directors, the approval of transactions with office holders or interested or related parties, an approval of a merger or the approval of the compensation policy, notice must be provided at least 35 days prior to the meeting.

Under our Articles, two or more shareholders holding at least 33% of the voting rights, present in person or by proxy, within half an hour of the time fixed for the commencement of meeting, will constitute a quorum for our general meetings of shareholders. A meeting adjourned for lack of quorum is adjourned for one week, to the same day, time and place, and if a quorum is not present at the adjourned meeting within half an hour of the time fixed for the commencement of the adjourned meeting, the persons present, in person or by proxy, shall constitute a quorum. Shareholders may vote in person or by proxy, and are required to prove title to their shares as required by the Companies Law pursuant to procedures established by the Board of Directors.

### ***Vote Requirements***

Under our Articles, all resolutions of our shareholders require a simple majority vote, unless otherwise required by the Companies Law or by our Articles. Under our Articles, approval by a special majority of 75% of the ordinary shares represented at a general meeting, in person or by proxy, is required in the event of a reorganization or liquidation of the Company (i) to approve the receipt of stock or securities of the other company; (ii) to distribute or allocate the securities or assets of the Company in a manner different to that in which they should have been distributed or allocated in accordance with the precise legal rights of the Company's shareholders; and (iii) to instruct that shares or assets of the Company, be valued in the manner and at the price resolved by the Company.

Under the Companies Law, certain actions require a special majority, including: (i) the approval of an extraordinary transaction with a controlling shareholder or in which the controlling shareholder has a personal interest, (ii) the terms of employment or other engagement of a controlling shareholder of the company or a controlling shareholder's relative (even if such terms are not extraordinary) and (iii) the adoption or amendment of a compensation policy for officers and directors and certain compensation-related matters, which require the approvals described below under "Disclosure of Personal Interests of an Office Holder and Approval of Certain Transactions—*Approval of Director and Officer Compensation.*"

Another exception to the simple majority vote requirement is a resolution for the voluntary winding up, or an approval of a scheme of arrangement or reorganization, of the company pursuant to Section 350 of the Companies Law, which requires the approval of a majority of the holders holding at least 75% of the voting rights represented at the meeting and voting on the resolution.

### ***Transfer of Shares***

Our ordinary shares may generally be freely transferred under the Articles, unless the transfer is restricted or prohibited by applicable law or the rules of the stock exchange on which the shares are traded. The ownership or voting of our ordinary shares by non-residents of Israel is not restricted in any way by our Articles or the laws of the State of Israel, except under certain circumstances for ownership by nationals of certain countries that are, or have been, in a state of war with Israel.

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## ***Fiduciary Duties of Directors and Executive Officers***

The Companies Law codifies the fiduciary duties that “office holders” owe to a company. An office holder, as defined in the Companies Law, is a general manager, chief business manager, deputy general manager, vice general manager, another manager directly subordinate to the general manager or any other person assuming the responsibilities of any of the foregoing positions without regard to such person’s title, or a director.

An office holder’s fiduciary duties consist of a duty of care and a duty of loyalty. The duty of care requires an office holder to act with the level of care with which a reasonable office holder in the same position would have acted under the same circumstances. The duty of care includes a duty to use reasonable means to obtain:

- information on the advisability of a given action brought for his or her approval or performed by virtue of his or her position; and
- all other important information pertaining to any such action.

The duty of loyalty requires an office holder to act in good faith and in the best interests of the company, and includes, among other things, the duty to:

- refrain from any conflict of interest between the performance of his or her duties to the company and his or her other duties or personal affairs;
- refrain from any activity that is competitive with the company;
- refrain from exploiting any business opportunity of the company to receive a personal gain for himself or herself or others; and
- disclose to the company any information or documents relating to the company’s affairs which the office holder received as a result of his or her position as an office holder.

We may approve an act specified above which would otherwise constitute a breach of the office holder’s duty of loyalty, provided that the office holder acted in good faith, the act or its approval does not harm the company and the office holder discloses his or her personal interest a sufficient amount of time before the date for discussion of approval of such act.

### ***Disclosure of Personal Interests of an Office Holder and Approval of Certain Transactions***

#### ***Disclosure of Personal Interests of an Office Holder.***

The Companies Law requires an office holder to promptly disclose to the board of directors any “personal interest” that he or she may have and all related material information known to him or her, in connection with any existing or proposed transaction by the company. An interested office holder’s disclosure must be made promptly and in any event no later than the first meeting of the board of directors at which the transaction is considered.

A personal interest includes an interest of any person in an act or transaction of a company, including a personal interest of one’s relative or of a corporate body in which such person or a relative of such person is a 5% or greater shareholder, director or general manager or in which he or she has the right to appoint at least one director or the general manager, but excluding a personal interest stemming solely from one’s ownership of shares in the company. A personal interest includes the personal interest of a person for whom the office holder holds a voting proxy or the personal interest of the office holder with respect to his or her vote on behalf of a person for whom he or she holds a proxy even if such shareholder has no personal interest in the matter. An office holder is not, however, obliged to disclose a personal interest if it derives solely from the personal interest of his or her relative in a transaction that is not considered an extraordinary transaction.

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A director and any other office holder who has a personal interest in a transaction which is considered at a meeting of the board of directors or the audit committee may generally (unless it is with respect to a transaction which is not an extraordinary transaction) not be present at such a meeting or vote on that matter unless, with respect to an office holder, the chairman of the audit committee or board of directors (as applicable) determines that the office holder should be present during the discussions in order to present the transaction that is subject to approval (provided that the office holder may not vote on the matter). If a majority of the members of the audit committee or the board of directors (as applicable) has a personal interest in the approval of such a transaction, then all of the directors may participate in deliberations of the audit committee or board of directors, as applicable, with respect to such transaction and vote on the approval thereof. If a majority of the members of the board of directors has a personal interest in the approval of a transaction, shareholder approval is also required for such transaction.

#### *Approval of Transactions with Officer Holders.*

If it is determined that an office holder has a personal interest in a non-extraordinary transaction, meaning any transaction that is in the ordinary course of business, on market terms or that is not likely to have a material impact on the company's profitability, assets or liabilities, approval by the board of directors is required for the transaction, unless the company's articles of association provide for a different method of approval. Our Articles provide that extraordinary transactions with an office holder or in which an officer holder has a personal interest shall be approved by the board of directors or the audit committee or by another entity authorized by the board of directors, and may be approved by granting general approval for a particular class of transactions or by approving a particular transaction. Any such transaction that is adverse to the company's interests may not be approved by the board of directors.

Approval first by the company's audit committee and subsequently by the board of directors is required for an extraordinary transaction (meaning, any transaction that is not in the ordinary course of business, not on market terms or that is likely to have a material impact on the company's profitability, assets or liabilities) in which an office holder has a personal interest.

#### *Approval of Director and Officer Compensation*

*Executive Officers other than the Chief Executive Officer.* Under the Companies Law, the terms of office and employment of officers other than the chief executive officer (who are not directors) require the approval by the (i) compensation committee; (ii) the board of directors; and (ii) if such compensation terms do not comply with the company's stated compensation policy, also by the shareholders, provided that either one of the following conditions are met (the "Special Majority"):

- at least a majority of the shares held by all shareholders who are not controlling shareholders and do not have a personal interest in such matter, present and voting at such meeting, are voted in favor of the compensation package, excluding abstentions; or
- the total number of shares of non-controlling shareholders and shareholders who do not have a personal interest in such matter and who vote against the compensation package does not exceed two percent (2%) of the aggregate voting rights in the Company.

However, if the shareholders of the company do not approve a compensation arrangement with an executive officer that is inconsistent with the company's stated compensation policy, the compensation committee and board of directors may override the shareholders' decision if each of the compensation committee and the board of directors provide detailed reasons for their decision.

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An amendment to an existing arrangement with an office holder who is not the chief executive officer or a director requires only the approval of the compensation committee, if the compensation committee determines that the amendment is not material in comparison to the existing arrangement. However, according to regulations promulgated under the Companies Law, an amendment to an existing arrangement with an office holder (who is not a director) who is subordinate to the chief executive officer shall not require the approval of the compensation committee if (i) the amendment is approved by the chief executive officer and the company's compensation policy provides that a non-material amendment to the terms of service of an office holder (other than the chief executive officer) may be approved by the Chief Executive Officer and (ii) the engagement terms are consistent with the company's compensation policy.

*Chief Executive Officer.* Under the Companies Law, the terms of office and employment of the chief executive officer require approval by the (i) compensation committee; (ii) the board of directors and (iii) the shareholders by the Special Majority. However, if the shareholders of the company do not approve the compensation arrangement with the chief executive officer, the compensation committee and board of directors may override the shareholders' decision if each of the compensation committee and the board of directors provide a detailed report for their decision. Approval of terms of office and employment for the chief executive officer which do not comply with the compensation policy may nonetheless be approved subject to two cumulative conditions: (i) the compensation committee and thereafter the board of directors approved the terms, after having taken into account the various compensation policy considerations and mandatory requirements set forth in the Companies Law with respect to office holder compensation, and (ii) the shareholders of the company approved the terms of office and employment for the chief executive officer which deviate from the compensation policy by means of the Special Majority. A company may be exempted from receiving shareholder approval with respect to the terms of office and employment of a proposed candidate for general manager if such candidate meets certain independence criteria, the terms of office and employment are consistent with the compensation policy, and the compensation committee has determined for specified reasons that presenting the matter for shareholder approval would prevent the proposed engagement. In addition, the terms of compensation of the chief executive officer will not require shareholder approval when extending or re-approving the company's engagement with its chief executive officer, provided that such terms are not more beneficial compared to his previous compensation terms approved by the shareholders pursuant to the Companies Law and provided that such terms comply with the company's compensation policy.

*Directors.* Under the Companies Law, the terms of office and employment of directors require approval by the (i) compensation committee; (ii) board of directors and (iii) shareholders of the company by ordinary majority. Approval of terms of office and employment for directors of a company that do not comply with the compensation policy may nonetheless be approved subject to two cumulative conditions: (i) the compensation committee and thereafter the board of directors, approved the terms after having taken into account the various policy considerations and mandatory requirements set forth in the Companies Law with respect to office holder compensation, and (ii) the shareholders of the company have approved the terms by means of the special majority required for approving the compensation policy (as detailed above). However, the terms of office and employment of directors are exempt from shareholder approval if such terms are either (i) only to the benefit of the company, or (ii) the compensation paid does not exceed the maximum compensation payable to external directors under regulations promulgated under the Companies Law, and the compensation committee and board of directors approved the foregoing.

Additional disclosure and approval requirements apply under Israeli law to certain transactions with controlling shareholders, certain transactions in which a controlling shareholder has a personal interest and certain arrangements regarding the terms of service or employment of a controlling shareholder.

### ***Shareholder Duties***

Under the Companies Law, a shareholder has a duty to act in good faith and in a customary manner towards the company and other shareholders and refrain from abusing his or her power in the company, including, among other things, in voting at a general meeting of shareholders on the following matters:

- any amendment to the Articles;
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- an increase of the company's authorized share capital;
- a merger; or
- approval of interested party transactions and act of office holders that require shareholder approval.

A shareholder also has a general duty to refrain from discriminating against other shareholders.

In addition, any controlling shareholder, any shareholder who knows that it possesses power to determine the outcome of a shareholder vote and any shareholder who has the power to appoint or prevent the appointment of an office holder in the company is under a duty to act with fairness towards the company. The Companies Law does not describe the substance of this duty, but provides that remedies applicable to a breach of contract, shall generally apply to a breach of the duty to act with fairness. With respect to the obligation to refrain from acting discriminatorily, a shareholder that is discriminated against can petition the court to instruct the company to remove or prevent the discrimination, as well as provide instructions with respect to future actions.

### ***Approval of Significant Private Placements***

Under the Companies Law, a significant private placement of securities requires approval by the board of directors and the shareholders by a simple majority. A private placement is considered a significant private placement if it will cause a person to become a controlling shareholder or if all of the following conditions are met:

- the securities issued amount to 20% or more of the company's outstanding voting rights before the issuance;
- some or all of the consideration is other than cash or listed securities or the transaction is not on market terms; and
- the transaction will increase the relative holdings of a shareholder who holds 5% or more of the company's outstanding share capital or voting rights or that will cause any person to become, as a result of the issuance, a holder of more than 5% of the company's outstanding share capital or voting rights.

### ***Merger and Acquisitions under Israeli Law***

**Full Tender Offer.** A person wishing to acquire shares or any class of shares of a publicly traded Israeli company and who would as a result hold over 90% of the company's voting rights, or issued and outstanding share capital or of a class of shares, is required by the Companies Law to make a tender offer to all of the company's shareholders for the purchase of all of the issued and outstanding shares of the company (or the applicable class). If (a) the shares represented by the shareholders who did not tender their shares in the tender offer constitute less than 5% of the issued and outstanding share capital of the company (or the applicable class), and more than half of the shareholders without a personal interest in accepting the offer tendered their shares, or (b) the shareholders who do not accept the offer hold less than 2% of the issued and outstanding share capital of the company (or the applicable class), then all of the shares that the acquirer offered to purchase will be transferred to the acquirer by operation of law. Upon a successful completion of such a full tender offer, any shareholder that was an offeree in such tender offer, whether such shareholder accepted the tender offer or not, may, within six months from the date of acceptance of the tender offer, petition the court to determine whether the tender offer was for less than fair value and whether the fair value should be paid as determined by the court, provided, however, subject to certain exceptions, the terms of the tender offer may state that a shareholder that accepts the offer waives such right. If the full tender offer was not accepted in accordance with any of the above alternatives, the acquirer may not acquire shares of the company that will increase its holdings to more than 90% of the voting rights or the issued and outstanding share capital of the company (or the applicable class) from shareholders who accepted the tender offer.

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*Special Tender Offer.* The Companies Law provides that, subject to certain exceptions, an acquisition of shares of an Israeli public company must be made by means of a special tender offer if as a result of the acquisition the purchaser would become a holder of 25% or more of the voting rights in the company. This rule does not apply if there is already another shareholder of the company that holds 25% or more of the voting rights in the company. Similarly, the Companies Law *provides* that, subject to certain exceptions, an acquisition of shares in a public company must be made by means of a special tender offer if as a result of the acquisition the purchaser would become a holder of more than 45% of the voting rights in the company, if there is no shareholder that holds more than 45% of the voting rights in the company.

No tender offer is required if the acquisition of shares (i) occurs in the context of a private placement by the company that received shareholder approval as a private placement purpose is to give the acquirer at least 25% of the voting rights in the company if there is no person who holds 25% or more of the voting rights in the company, or as a private placement whose purpose is to give the acquirer 45% of the voting rights in the company, if there is no person who holds 45% of the voting rights in the company; or (ii) was from a holder of 25% or 45% of the voting rights in the company, as the case may be.

A special tender offer must be extended to all shareholders of a company. A special tender offer generally may be consummated only if (i) at least 5% of the voting power attached to the company's outstanding shares will be acquired by the offeror; and (ii) the number of shares tendered in the offer exceeds the number of shares whose holders objected to the offer (excluding the purchaser, its controlling shareholders, holders of 25% or more of the voting rights in the company or any person having a personal interest in the acceptance of the tender offer, or anyone on their behalf, including any such person's relatives and entities under their control).

If a special tender offer is accepted, then shareholders who did not respond to or that had objected the offer may accept the offer within four days of the last day set for the acceptance of the offer and they will be considered to have accepted the offer from the first day it was made.

If a special tender offer is accepted, then the purchaser or any person or entity controlling it, at the time of the offer, and any person or entity under common control with the purchaser or such controlling person or entity may not make a subsequent tender offer for the purchase of shares of the target company and may not enter into a merger with the target company for a period of one year from the date of the offer, unless the purchaser or such person or entity undertook to effect such an offer or merger in the initial special tender offer.

*Merger.* The Companies Law permits merger transactions if approved by each party's board of directors and, unless certain requirements described under the Israeli Law are met, the majority of each party's shares voted on the proposed merger at a shareholders' meeting called on at least 35 days prior notice. The board of directors of a merging company may not approve the merger if it determines that there exists a reasonable concern that, as a result of the merger, the surviving company will be unable to satisfy the obligations of the merging entities.

Under the Companies Law, merger transactions may be approved by holders of a simple majority of our shares present, in person or by proxy, at a general meeting and voting on the transaction. In determining whether the required majority has approved the merger, if shares of a company are held by the other party to the merger, or by any person holding at least 25% of the outstanding voting shares or 25% of the means of appointing directors of the other party to the merger, then a vote against the merger by holders of the majority of the shares present and voting, excluding shares held by the other party or by such person, or anyone acting on behalf of either of them, is sufficient to reject the merger transaction, provided. If the transaction would have been approved but for the exclusion of the votes of certain shareholders as provided above, a court may still approve the merger upon the request of holders of at least 25% of the voting rights of a company, if the court holds that the merger is fair and reasonable, taking into account the value of the parties to the merger and the consideration offered to the shareholders. If a merger is with a company's controlling shareholder or if the controlling shareholder has a personal interest in the merger, then the merger is instead subject to the same special majority approval that governs all extraordinary transactions with controlling shareholders.

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Under the Companies Law, a merging company must inform its creditors of the proposed merger. Upon the request of a creditor of either party to the proposed merger, the court may delay or prevent the merger if it concludes that there exists a reasonable concern that, as a result of the merger, the surviving company will be unable to satisfy the obligations of any of the parties to the merger.

In addition, a merger may not be consummated unless at least 30 days have passed from the receipt of the shareholders' approval of both merging companies and 50 days have passed from the date that a merger proposal has been filed with the Israeli Registrar of Companies.

### ***Changes in Capital***

Our Articles enable us to increase or reduce our share capital. Any such changes are subject to the provisions of the Companies Law and must be approved by a resolution duly passed by our shareholders at a general meeting by an ordinary majority. In addition, transactions that have the effect of reducing capital, such as the declaration and payment of dividends in the absence of sufficient retained earnings or profits, require the approval of both our board of directors and an Israeli court.

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**Subsidiaries**

The following is a list of our significant subsidiaries, including the name, country/jurisdiction of incorporation and the proportion of our ownership interest.

<b><u>Subsidiary</u></b>	<b><u>Jurisdiction</u></b>	<b><u>Ownership</u></b>
Tower US Holdings Inc.	Delaware	100% directly
Tower Semiconductor NPB Holdings Inc.	Delaware	100% indirectly through Tower US Holdings Inc.
Tower Semiconductor Newport Beach, Inc.	Delaware	100% indirectly through Tower Semiconductor NPB Holdings Inc.
Newport Fab LLC	Delaware	100% indirectly through Tower Semiconductor Newport Beach Inc.
Tower Semiconductor San Antonio Inc.	Delaware	100% indirectly through Tower US Holdings Inc.
TowerJazz Panasonic Semiconductor Co., Ltd.	Japan	51% directly

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**Certification**

I, Russell C. Ellwanger, certify that:

1. I have reviewed this annual report on Form 20-F of Tower Semiconductor Ltd.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15(d)-15(f)) for the company and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

April 30, 2020

/s/ Russell C. Ellwanger  
Russell C. Ellwanger  
Chief Executive Officer  
Tower Semiconductor Ltd.

**CERTIFICATION**

I, Oren Shirazi, certify that:

1. I have reviewed this annual report on Form 20-F of Tower Semiconductor Ltd.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15(d)-15(f)) for the company and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

April 30, 2020

/s/ Oren Shirazi  
Oren Shirazi  
Senior VP & Chief Financial Officer  
Tower Semiconductor Ltd.

**Certification Pursuant To  
18 USC Section 1350,  
As Adopted Pursuant To  
Section 906 Of The Sarbanes-Oxley Act Of 2002**

In connection with the Annual Report of Tower Semiconductor Ltd. (the “Registrant”) on Form 20-F for the year ended December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Russell C. Ellwanger, Chief Executive Officer of the Registrant, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. the Report fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934; and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

/s/ Russell C. Ellwanger  
Russell C. Ellwanger  
Chief Executive Officer

April 30, 2020

A signed original of this written statement required by Section 906 has been provided to the Registrant and will be retained by the Registrant and furnished to the Securities and Exchange Commission or its staff upon request.

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**Certification Pursuant To  
18 USC Section 1350,  
As Adopted Pursuant To  
Section 906 Of The Sarbanes-Oxley Act Of 2002**

In connection with the Annual Report of Tower Semiconductor Ltd. (the “Registrant”) on Form 20-F for the year ended December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Oren Shirazi, Chief Financial Officer of the Registrant, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. the Report fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934; and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

/s/ Oren Shirazi  
Oren Shirazi  
Senior VP & Chief Financial Officer

April 30, 2020

A signed original of this written statement required by Section 906 has been provided to the Registrant and will be retained by the Registrant and furnished to the Securities and Exchange Commission or its staff upon request.

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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statements Nos. 33-80947, 333-06482, 333-83204, 333-147071, 333-166428, 333-178167 and 333-204173 on Form S-8 of our reports dated March 2, 2020, relating to the consolidated financial statements of Tower Semiconductor Ltd. (the “Company”) and the effectiveness of the Company’s internal control over financial reporting, appearing in this Annual Report on Form 20-F for the year ended December 31, 2019.

/s/ Brightman Almagor Zohar &Co

Brightman Almagor Zohar &Co.  
Certified Public Accountants  
A member of Deloitte Touche Tohmatsu

Tel Aviv, Israel  
April 27, 2020

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