RADWARE LTD
Form 20-F
April 15, 2019

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

FORM 20-F

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

OR

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

For the fiscal year ended
December 31, 2018

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from __________ to __________

OR

SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
Date of event requiring this shell company report _________

Commission file number: 000-30324

RADWARE LTD.
(Exact name of registrant as specified in its charter)

Israel
(Jurisdiction of incorporation or organization)

22 Raoul Wallenberg Street, Tel Aviv 6971917, Israel
(Address of principal executive offices)

Doron Abramovitch
Chief Financial Officer
Tel. +972-3-7668666, Fax: +972-3-7668982
22 Raoul Wallenberg Street, Tel Aviv 6971917, Israel
(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

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

Title of each class	Name of each exchange on which registered
Ordinary Shares, NIS 0.05 par value per share	The Nasdaq Stock Market LLC

Securities registered or to be registered pursuant to Section 12(g) of the Act:
None
(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:
None
(Title of Class)

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report (December 31, 2018):

46,347,403 Ordinary Shares, NIS 0.05 par value per share

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 if any, every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes No

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

Large Accelerated Filer Accelerated Filer
Non-Accelerated Filer Emerging growth company

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

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

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

U.S. GAAP

International Financial Reporting Standards as issued by the International Accounting Standards Board

Other

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

Item 17 Item 18

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

Yes No

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INTRODUCTION

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

- “we,” “us,” “our,” the “Company,” and “Radware” are to Radware Ltd. and its subsidiaries;

- “ordinary shares” are to our Ordinary Shares, par value NIS 0.05 per share;

- “Companies Law” or the “Israeli Companies Law” are to the Israeli Companies Law, 5759-1999, as amended;

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

- the "U.S." are to the United States;

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

- “Nasdaq” are to the Nasdaq Global Market (formerly, the Nasdaq National Market);

- “dollars” “$” or “US$” are to U.S. dollars; and

- “NIS” or “shekels” are to New Israeli Shekels.

We have registered trademarks for, among others, Radware®; Radware Logo: ®; OnDemand Switch®; Alteon®; APSolute®; LinkProof®; DefensePro®; CID®; SIPDirector®; AppDirector®; AppXcel®; AppXML®; AppWall®; APSolute Insite®; Triangulation®; SmartNat®; StringMatch Engine®; Web Server Director®; Fireproof®; SecureFlow®; APSolute Vision®; VAdapter®; vDirect®; Alteon VA®; AppShape®; FastView®; DefenseFlow®; TeraVIP®; Virtual Director®; DefensePipe®;ADC Fabric®; CyberStack® and Virtual DefensePro® and we have trademark applications pending for, among others, “ADC-VX”™; VADI™ (Virtual Application Delivery Infrastructure) and “Inflight”™. Unless the context otherwise indicates, all other trademarks and trade names appearing in this annual report are owned by their respective holders.

Our consolidated financial statements appearing in this annual report are prepared in dollars and in accordance with U.S. GAAP and are audited in accordance with the standards of the Public Company Accounting Oversight Board in the United States.

On April 12, 2019, the exchange rate between the NIS and the dollar, as quoted by the Bank of Israel, was NIS3.578 to $1.00. Unless the context otherwise indicates, statements in this annual report that provide the dollar equivalent of NIS amounts or provide the NIS equivalent of dollar amounts are based on such exchange rate.

Statements made in this annual report concerning the contents of any contract, agreement or other document are summaries of such contracts, agreements or documents and are not complete descriptions of all of their terms. If we filed any of these documents as an exhibit to this annual report or to any registration statement or annual report that we previously filed, you may read the document itself for a complete description of its terms, and the summary included herein is qualified by reference to the full text of the document which is incorporated by reference into this annual report.

Unless otherwise indicated, information contained in this annual report concerning our industry and the markets in which we operate, including our competitive position and market opportunity, is based on information from our own management estimates and research, as well as from industry and general publications and research, surveys and studies conducted by third parties. Management estimates are derived from publicly available information, our knowledge of our industry and assumptions based on such information and knowledge, which we believe to be reasonable. Our management estimates have not been verified by any independent source, and we have not independently verified any third-party information. In addition, assumptions and estimates of our and our industry's future performance are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in Item 3.D "Risk Factors" below.

CAUTIONARY STATEMENT REGARDING
FORWARD-LOOKING STATEMENTS

Except for the historical information contained herein, the statements contained in this annual report are forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995 and other federal securities laws with respect to our business, financial condition and results of operations. Actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including all the risks discussed in "Risk Factors" and elsewhere in this annual report.

We urge you to consider that statements which use the terms "believe," "do not believe," "expect," "plan," "intend," "estimate, "anticipate," and similar expressions are intended to identify forward-looking statements. Such forward-looking statements appear in Item 3.D "Risk Factors", Item 4 "Information on the Company", and Item 5 "Operating and Financial Review and Prospects" as well as elsewhere in this annual report. These statements reflect our current views with respect to future events and are based on assumptions and are subject to risks and uncertainties, including those discussed under Item 3.D "Risk Factors" and in our other filings with the SEC. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof.

Except as required by applicable law, including the securities laws of the United States, we do not intend to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

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PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

A. Selected Financial Data

The following tables present selected information from our consolidated statements of income (loss) and balance sheets data for the periods and as of the dates indicated. We derived the selected consolidated statements of income (loss) for the years ended December 31, 2018, 2017and 2016 and the selected balance sheets data as of December 31, 2018 and 2017 from our audited consolidated financial statements included elsewhere in this annual report on Form 20-F, which have been prepared in accordance with U.S. GAAP and audited by Kost, Forer, Gabbay & Kasierer, an independent registered public accounting firm and a member firm of Ernst & Young Global. The selected consolidated statements of income (loss) data for the years ended December 31, 2015 and 2014 and the selected balance sheets data as of December 31, 2016, 2015 and 2014 are derived from our audited consolidated financial statements not included in this annual report, which have been prepared in accordance with U.S. GAAP.

You should read the following selected financial data together with the section of this annual report entitled "Operating and Financial Review and Prospects" and our consolidated financial statements together with the notes thereto included elsewhere in this annual report.

	Year ended December 31,				
	2018	2017	2016	2015	2014
	(U.S. dollars and share amounts in thousands, except per share data)				
Consolidated Statements of Income (loss) Data:					
Revenues:					
Products	$118,062	$ 117,968	$ 110,186	$136,793**	$143,466**
Services	116,342	93,401	86,399	79,773 **	78,426 **
	234,404	211,369	196,585	216,566	221,892
Cost of revenues:					
Products	30,803	30,862	27,320	29,159	29,448
Services	10,872	8,754	8,375	9,041	10,284
	41,675	39,616	35,695	38,200	39,732
Gross profit	192,729	171,753	160,890	178,366	182,160
Operating expenses, net:					
Research and development, net	57,674	59,003	51,732	49,987	44,081
Sales and marketing	111,386	108,744	103,774	93,347	93,203
General and administrative	16,145	17,577	18,133	17,033	19,797
Other income	-	(6,900)	-	-	-
Total operating expenses	185,205	178,424	173,639	160,367	157,081
Operating income (loss)	7,524	(6,671)	(12,749)	17,999	25,079
Financial income, net	7,274	4,830	5,741	5,867	5,802
Income (loss) before taxes on income	14,798	(1,841)	(7,008)	23,866	30,881
Taxes on income	3,063	5,652	1,651	5,297	5,931
Net income (loss)	$11,735	$ (7,493)	$ (8,659)	$18,569	$24,950
Basic net earnings (loss) per share*	$0.26	$ (0.17)	$ (0.20)	$0.40	$0.55
Diluted net earnings (loss) per share*	$0.25	$ (0.17)	$ (0.20)	$0.40	$0.53

* See notes 2(y) and 11 to our consolidated financial statements included elsewhere in this annual report for an explanation regarding the computation of basic and diluted net earnings (loss) per ordinary share.

** The breakdown between product and service revenues for 2015 and 2014 was reclassified to include most subscription revenues in product revenues rather than allocating some to product and some to service revenues, which has resulted in a change to previously published figures for the periods ended December 31, 2015 and December 31, 2014, respectively.

	Year ended December 31,				
	2018	2017	2016	2015	2014
	(in thousands)				
Weighted average number of ordinary shares used in computing basic net earnings (loss) per share	45,289	43,476	43,868	45,895	45,309
Weighted average number of ordinary shares used in computing diluted net earnings (loss) per share	47,692	43,476	43,868	46,739	46,895

	As of December 31,				
	2018	2017	2016	2015	2014
	(U.S. dollars in thousands)				
Consolidated Balance Sheet Data:					
Cash and cash equivalents, short-term bank deposits and marketable securities	$316,399	$200,961	$226,086	$130,669	$104,416
Long-term bank deposits and marketable securities	84,669	143,338	94,059	184,457	226,273
Working capital	241,003	143,087	181,502	101,029	76,010
Total assets	532,721	471,410	430,336	430,887	442,573
Shareholders' equity	363,957	315,356	299,763	319,123	333,697
Capital Stock	384,229	349,923	326,001	313,445	294,738

B. Capitalization and Indebtedness

Not applicable.

C. Reasons for the Offer and Use of Proceeds

Not applicable.

D. Risk Factors

You should carefully consider the following risks before deciding to purchase, hold or sell our ordinary shares. Our business, operating results and financial condition could be seriously harmed due to any of the following risks. The following risks are not the only risk factors facing our Company. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business. The trading price of our ordinary shares could decline due to any of these risks. You should also refer to the other information contained or incorporated by reference in this annual report, before making any investment decision regarding our Company.

Risks Related to Our Business and Our Industry

We have incurred net losses in the past and may incur losses in the future.

Although we returned to profitability in 2018, we incurred net losses during 2016 and 2017. Our ability to maintain or increase profitability in the future depends in part on the following factors: the economic health of the global economy; the rate of growth of, and changes in technology trends in our market and other industries in which we currently or may in the future operate; our ability to develop and manufacture new products and technologies and deliver new solutions in a timely manner; the competitive position of our products; the continued acceptance of our products and services by our customers and in the industries that we serve; and our ability to manage expenses. In the future, it may be necessary, to undertake cost reduction initiatives to remain profitable, which could lead to a deterioration of our competitive position. Any difficulties that we encounter as we reduce our costs could negatively impact our results of operations and cash flows. We cannot assure you that we will remain profitable. Our revenues also may not grow, may grow at a lower rate than experienced in 2018 and 2017 or may decline as they did in 2016, which would negatively impact our results of operations and cash flows.

During 2018, our operating expenses grew mainly due to sales and marketing related expenses. We may continue to increase our operating expenses in future periods. Our decision to increase operating expenses and the scope of such increases depends upon several factors, including the market situation and the effectiveness of our past expenditures. We may continue to make additional expenditures in anticipation of generating higher revenues, which we may not realize, if at all, until sometime in the future. This could cause reductions in our profitability or lead to losses, as it did in 2016 and 2017. Additionally, a failure of any acquisition or product development initiative to produce increased revenues could have a material adverse effect on our operations and profitability.

If our revenues do not increase as anticipated or decline, or if our expenses increase more than anticipated, we may incur losses.

We must manage our anticipated growth effectively in order to be profitable.

We have actively expanded our operations in the past and may continue to expand them in the future in order to gain market share in the evolving market for cyber security and application delivery solutions. This expansion has required, and may continue to require, managerial, operational and financial resources.

In some cases, we may choose to increase our cost of operations at the expense of our short-term profitability in order to support future expansion and growth. We cannot assure you that we will continue to expand our operations successfully. If we are unable to manage our expanding operations effectively, our revenues may not increase or may decline, our cost of operations may rise and we may not be profitable.

Global rollout of new information systems could disrupt our operations and cause unanticipated increases in our costs.

In the past few years, we have invested significant capital and human resources in a project for a company-wide enterprise resource planning, or ERP, system, including modules such as a new customer relationship management, or CRM, system for our sales operations and new customer service system for our customer support. We intend to continue to invest significant capital and human resources to further improve and implement our ERP and other information systems. Any major disruptions or deficiencies in the design and implementation of the new information systems, particularly those that impact our operations, could adversely affect our ability to process customer orders, ship products, provide services and support to our customers, bill and track our customers, timely report our financial results and otherwise run our business.

Changing or severe global economic conditions and volatility of the market for our solutions, including slow-down in expenditures and other trends in our industry, could have a material adverse effect on our results of operations.

Our business is affected by global economic conditions and their impact on current and anticipated market demand for our solutions. While the global economy has improved in recent years, uncertainties surrounding the strength of the recovery in many regions remain. As our operations are on a global level, we may be affected by such events and other economic and political uncertainties. Uncertainty about current global economic conditions continues to pose a risk as customers may postpone or reduce spending in response to such uncertainties. For example, the recent escalating disagreements between the U.S. and certain European states, as well as between the U.S. and China, with respect to placing tariffs and other trade barriers, may impact, among other things, the demand for our products and services. Furthermore, should companies in our target markets reduce capital or operational expenditures, we may experience a reduction in sales, longer sales cycles, and slower adoption of new technologies as well as downward pressure on the price of our solutions. In addition, if the market for our products and services is stagnant and our customers experience low visibility, we may not be able to increase our sales (whether direct sales or indirect sales through our distributors). Each of the above scenarios could have a material adverse effect on our business, operating results and financial condition.

Competition in the market for cyber security and application delivery solutions and our industry in general is intense. As a result, we may lose market share and we may be unable to maintain profitability.

The information technology, or IT, marketplace is competitive and has very few barriers to entry. In particular, the cyber security and application delivery market in which we focus is highly competitive. We expect competition to intensify in the future, and we may lose market share if we are unable to compete effectively.

Most of our competitors have greater financial, personnel and other resources than us, which may limit our ability to effectively compete with them. Our principal competitors in the cyber security and application delivery market include: A10 Networks, Inc., Akamai Technologies, Inc., or Akamai, Amazon.Com, Inc. (through AWS Elastic Load Balancing service, AWS WAF service and AWS Shield service), Netscout Systems, Inc. (through Arbor DDoS Protection), Brocade Limited (through Broadcom Communications Systems, Inc.), Citrix Systems, Inc., F5 Networks, Inc., Imperva, Inc., or Imperva and Microsoft Azure (through Azure Application Gateway). We expect to continue to face additional competition as new participants enter the market or extend their portfolios into related technologies. Larger companies with substantial resources, brand recognition and sales channels may form alliances with or acquire competing cyber security and application delivery solutions and emerge as significant competitors.

Competition may result in lower prices or reduced demand for our solutions and a corresponding reduction in our ability to recover our costs, which may impair our ability to achieve, maintain and increase profitability. Furthermore, the dynamic market environment poses a challenge in predicting market trends and expected growth. We cannot assure you that we will be able to implement our business strategy in a manner that will allow us to be competitive. If any of our competitors offer products or services that are more competitive than ours, we could lose market share and our business, financial condition and results of operations could be materially and adversely affected as a result.

Our global operations may expose us to additional risks

We currently offer our products in over 40 countries, including the U.S. For the years ended December 31, 2018 and 2017, our sales outside the Americas (which include the U.S., Canada as well as Central America and Latin America, or CALA) represented approximately 56% and 54%, respectively, of our total sales. Our global business operations involve varying degrees of risk and uncertainty inherent in doing business in so many different jurisdictions. Such risks include, among others, difficulties and costs of staffing and managing foreign operations; the possibility of unfavorable circumstances and additional compliance costs arising from host country laws or regulations, including unexpected changes of interpretations thereof and reduced protection for intellectual property rights in some countries; partial or total expropriation, export duties and quotas; local tax exposure; political instability, insurrection or war; differences in business practices; and recessionary environments in multiple foreign markets. We cannot be certain that the foregoing factors will not have a material adverse effect on our future revenues and, as a result, on our business, operating results and financial condition.

We may experience significant fluctuations in our quarterly financial performance.

Our quarterly operating results have varied significantly in the past and may vary significantly in the future as a result of various factors, many of which are outside of our control. A delay in our recognition of revenue may have a negative impact on our results of operations for a given quarter. In addition, over the past few years, we changed our sales model, to increased product subscription sales, leading to a deferral of revenue recognition. While hardware products are recognized upon their shipment and invoicing, product subscriptions and support services are recognized throughout the term of their respective contract length. At the same time, we base our decisions regarding our operating expenses on anticipated sales trends and our expense levels are relatively fixed. Since only a portion of our operating expenses are dependent on our revenues, if our revenues fall below our expectations, our earnings and profitability for that period will be materially and adversely affected. Our future operating results will depend on many additional factors, including, but not limited to, the following:

- demand for our solutions;
- sales cycles (see "Risk Factors— Our products generally have long sales cycles, which increase our costs in obtaining orders and reduce the predictability of our earnings");
- seasonal trends, as more fully described below;
- new product announcements by us and our competitors;
- budgeting cycles of our customers;
- changes in our strategy;
- currency exchange rate fluctuations and economic conditions in the geographic areas where we operate; and
- those other factors discussed in this annual report.

In addition, our quarterly operating results have been, and are likely to continue to be, influenced by seasonal fluctuations in the sales of our products and services. Because our sales have mostly grown year-over-year since our inception, these fluctuations may not be apparent from our historical financial statements. However, we believe that our sales and sales growth have been, and will continue to be, affected by the seasonal purchasing patterns of some of our customers, primarily in the first quarter ended March 31 when our sales may be reduced due to our customers' annual purchasing budget planning process and in the third quarter ended September 30 due to a slowdown in business activities during the summer months in Europe. Conversely, our sales during the fourth quarter ended December 31 have typically increased because some of our customers tend to make greater capital expenditures towards the end of their fiscal years.

Due to the foregoing factors, our sales and operating results in any quarter are difficult to forecast, and period-to-period comparisons of our operating results may not necessarily be meaningful. In addition, in some future quarter our operating results may be below the expectations of public market analysts and investors. In such event the price of our ordinary shares may be materially adversely affected.

If the market for cyber security and application delivery solutions does not continue to develop and grow, we will not be able to sell enough of our solutions to maintain profitability.

The cyber security and application delivery market in which we operate is rapidly evolving and we cannot assure you that it will continue to develop and grow. In addition, we cannot assure you that our solutions and technology will keep pace with the changes to this market. Market acceptance of cyber security and application delivery solutions may be inhibited by, among other factors, a lack of anticipated congestion and strain on existing network infrastructures and the availability of alternative solutions. If demand for cyber security and application delivery solutions does not continue to grow, or grows in a slower pace than expected, we may not be able to sell enough of our solutions to maintain and increase our profitability.

If the market for our cloud-based solutions does not continue to develop and grow, we may incur capital and operation loses.

As we continue to expand our cloud-based solutions offering, our investments, both capital and operational, in our cloud business increase. We cannot assure you that sales of our cloud based solutions will continue to develop and grow. In addition, we cannot assure you that our services and technology will keep pace with the changes in this market. Specifically, the emergence of alternative solutions, such as from Amazon AWS or Microsoft Azure public cloud may negatively affect sales of our products and services.

We must develop new products and services as well as enhancements and new features to existing solutions to remain competitive. If we fail to develop new products and services of fail to develop product enhancements on a timely basis, we may lose market share.

The market for cyber security and application delivery solutions is characterized by rapid technological changes, frequent new product introductions, changes in customer requirements and evolving industry standards. Our products typically constitute a critical portion of our customers' data centers. In recent years, the capacity of transactions in such data centers has been steadily increasing. Due to such increases in capacity and in order to remain competitive in our industry, we must address the increased needs of our customers by developing more powerful platforms for our products. Furthermore, fundamental changes in our customers' data centers' infrastructure and application topologies may require us to reposition our solutions and offer different solution packaging. For example, we believe we will need to provide solutions that address microservices environments. Additionally, we must address increased demands by our customers for advancements in our applications in order to support our customers' growing needs and evolutions in their data centers. In order to meet this challenge and remain competitive in the market, we have introduced and must continue to introduce new enhancements to our existing product lines. Furthermore, the cyber-security market is characterized by rapid changing customer requirements driven by legal, regulatory and self-regulatory compliance mandates, frequent new product introductions and enhancements and evolving industry standards in computer hardware and software technology. Customers and industry analysts expect speedy introduction of software and new functionality to respond to new cyber threats, requirements and risks and we may be unable to meet these expectations.

Accordingly, our future success will depend to a substantial extent on our ability to: invest significantly in research and development; develop, introduce and support new products and services and enhancements on a timely basis; and gain market acceptance of our products.

We have developed and are currently developing new products and enhancements to our existing products and services offerings. Our development of new products and enhancement of our offerings is undertaken in an effort to remain competitive in our market, and our failure to do so could result in a decrease in our revenues. In addition, we have invested and must continue to invest in research and development in order to remain competitive in our industry. However, there can be no assurances that continued investment and higher costs of research and development, including associated capital expenditures, will ultimately result in us maintaining or increasing our market share, which would result in a decline to our operating results. If our research and development expenses increase without a corresponding increase in our revenues, it could have a material adverse effect on our operating results. Also, we may not be able to successfully complete the development and market introduction of new solutions or solutions enhancements in a timely manner. If we fail to develop and deploy new solutions and enhancements to our existing solutions on a timely basis, or if we fail to gain market acceptance of our new or enhanced solutions, our revenues will decline and we may lose market share to our competitors.

During 2018, we invested in, and plan to continue to invest in 2019, in developing or when appropriate, acquiring, capabilities to advance our product offering and market vision. One of the primary trends in the past few years in our industry is the shift to providing services through the cloud. We have also invested and intend to continue to invest substantial resources in developing and enhancing our cloud offerings. There is no assurance that we will be successful in marketing and selling our next generation cyber security and application delivery solutions, or that we will be able to grow revenues to justify our investments.

Moreover, we identified an industry trend in the past few years that drives a shift from customers' maintaining on-premise physical appliances or having internal specialized knowledge to support and maintain complex IT infrastructure to relying on third party provided managed IT services. In response to such market trend, we have increased our support offerings to include, among others, such managed services.

Our failure to develop and market new products, product enhancements or services on a timely basis or our failure to gain market acceptance of our new products and services could result in our loss of market share and our business and could materially and adversely affect our financial condition and results of operations.

Even if we are able to anticipate, develop and commercially introduce enhancements and new products and services, there can be no assurance that we will be successful in developing sufficient market awareness of them or that such enhancements or new products and services will achieve widespread market acceptance. For example, while the majority of our current revenues are derived from the sales of our DefensePro and Alteon appliances, we also offer our security products as cloud-based services. The market for cloud-based security solutions is relatively new and it is uncertain whether our security cloud-based services will continue to gain rapid market acceptance. In addition, diversifying our product offerings will require significant investment and planning, will bring us more directly into competition with software and cloud-based providers that may be better established or have greater resources than we do, will require additional investments of time and resources in the development and training of our channel and strategic partners and will entail a significant risk of failure.

Government regulation affecting our business is evolving, and unfavorable changes could harm our business.

Laws and regulations that apply to cloud-based solutions are becoming more prevalent and constantly evolving, particularly in the area of privacy. We may be impacted by changes in privacy-related regulations governing the collection, use, retention, sharing and security of data that we receive from our customers and/or visitors to their websites and others. Complying with a diverse range of privacy requirements could cause us to incur substantial costs or require us to change our business practices in a manner adverse to our business. Any failure, or perceived failure, by us to comply with any privacy-related laws, government regulations or directives, or industry self-regulatory principles could result in damage to our reputation or proceedings or actions against us by governmental entities or others, which could potentially have an adverse effect on our business. For example, the European General Data Protection Regulation (Regulation (EU) 2016/679), or GDPR, that came into effect on May 25, 2018, includes operational requirements for companies that receive or process personal data of residents of the European Union and non-compliance will result in significant penalties. Our compliance with GDPR, as well as other data privacy laws, evolving regulations of cloud computing, cross-border data transfer restrictions and other domestic or foreign regulations, carried and will continue to carry capital expenditure investments.

Furthermore, laws, regulations and industry standards are subject to drastic changes that, particularly in the case of industry standards, may arrive with little or no notice, and these could either help or hurt the demand for our products. If we are unable to adapt our products and services to changing regulatory standards in a timely manner, or if our products fail to assist our customers with their compliance initiatives, our customers may lose confidence in our products and could switch to competing solutions. In addition, if regulations and standards related to cyber-security are changed in a manner that makes them less onerous, our customers may view government and industry regulatory compliance as less critical to their businesses, and our customers may purchase fewer of our products and services, or none at all. In either case, our sales and financial results would suffer.

Outages, interruptions or delays in hosting services could impair the delivery of our cloud-based security services and harm our business.

We offer infrastructure that supports our distributed denial of service (DDoS) and web application firewall (WAF) cloud-based services and scrubbing center services. Despite precautions taken within our own internal network and at these third party facilities, the occurrence of a natural disaster or an act of terrorism or other unanticipated problems could result in lengthy interruptions in our services.

The DDoS and WAF cloud-based security services that we provide are operated from a network of third party facilities that host the software and systems that operate these security services. Any damage to, or failure of, our internal systems or systems at third party hosting facilities could result in outages or interruptions in our DDoS and WAF cloud-based services. Outages or interruptions in our DDoS and WAF cloud-based security services may cause our customers and potential customers to believe our DDoS and WAF cloud-based security services are unreliable, cause us to issue credits or pay penalties, cause customers to terminate their subscriptions and adversely affect our reputation and renewal rates and our ability to attract new customers, ultimately harming our business and revenue.

Some of our products and services contain “open source” and third party software, and any failure to comply with the terms of one or more of these open source and third party licenses could negatively affect our business.

Some of our products utilize open source technologies. Some open source software licenses require users who distribute or make available as a service open source software as part of their own software product to publicly disclose all or part of the source code of the users’ software product or to make available any derivative works of the open source code on unfavorable terms or at no cost. We have established processes to help alleviate these risks, including a review process for screening requests from our development organization for the use of open source software, but we cannot be sure that all open source software is submitted for approval prior to use in our products. In addition, open source license terms may be ambiguous and many of the risks associated with use of open source software cannot be eliminated, and could, if not properly addressed, negatively affect our business. We may face ownership claims of third parties over, or seeking to enforce the license terms applicable to, such open source software, including by demanding the release of the open source software, derivative works or our proprietary source code. Any such requirement to disclose our source code or other confidential information related to our products could materially and adversely affect our competitive position and may adversely impact our business, results of operations and financial condition. In addition, if the license terms for the open source code change, we may be forced to re-engineer our software or incur additional costs.

In addition, some of our products and services include other software or intellectual property licensed from third parties. This exposes us to risks over which we may have little or no control. There can be no assurance that the licenses from such third party licensors will continue to be available to us on acceptable terms, if at all. In addition, while we believe we are compliant with the terms of our third party licenses, such licensors may still assert that we are in breach of the terms of a license, which could give such licensors the right to terminate a license or seek damages from us, or both. Our inability to maintain such licenses or the need to engage in litigation regarding these matters, could result in delays in releases of new products, and could otherwise disrupt our business, unless and until equivalent technology can be identified, licensed or developed at substantially the same costs to us.

We may pursue acquisitions or other investments that could disrupt our business and harm our financial condition.

As part of our business strategy, we may invest in or acquire complimentary businesses, technologies or assets or enter into joint ventures or other strategic relationships with third parties. For example, in January 2017, we acquired Seculert, an Israeli-based company engaged in cyber-attack detection and hypertext transfer protocol (HTTP) analytics solutions and developing user and entity behavioral analysis (UEBA) solutions and, in March 2019, we acquired Kaalbi Technologies Private Ltd. ("ShieldSquare") an India-based company engaged in bot mitigation and bot management solutions. In connection with our past acquisitions and with any future acquisitions, we have and may in the future assume liabilities, incur acquisition related costs, incur amortization expenses or realize write-offs on assets no longer being used or phased out. In addition, the future valuation of these acquisitions may decrease from the market price paid by us which could result in the impairment of our goodwill and other intangible assets associated with the relevant acquired assets. Moreover, our operation of any acquired or merged businesses, technologies or assets could involve numerous risks, including:

- post-merger integration problems resulting from the combination of any acquired operations with our own operations or from the combination of two or more operations into a new merged entity;
- diversion of management's attention from our core business;
- substantial expenditures, which could divert funds from other corporate uses;
- entering markets in which we have little or no experience;
- loss of key employees of the acquired operations; and
- known or unknown contingent liabilities, including, but not limited to, tax and litigation costs.

We cannot be certain that the Seculert or ShieldSquare acquisitions or that any future acquisitions or mergers will be successful. If the operation of the business of any future acquisitions or mergers disrupts our operations, our results of operations may be adversely affected, and even if we successfully integrate the acquired business with our own, we may not receive the intended benefits of the acquisition. In addition, our pursuit of potential acquisitions may divert our management's attention from our core business and require considerable cash outlays at the expense of our existing operations, whether or not such transactions are consummated. For example, the technology we acquired as part of the Seculert acquisition developed, in our case, into technology designated to mitigate cloud native attacks and risks and is now our new Cloud Workload Protection (CWP) and the technology we acquired as part of the ShieldSquare product is expected to result in additional operating costs in 2019. A failure of any acquisitions or product developments to produce increased revenues could have a material adverse effect on our operations and profitability.

An increasing amount of intangible assets and goodwill on our books may in the future lead to significant impairment charges.

The amount of goodwill and intangible assets on our consolidated balance sheets was, as of December 31, 2018, approximately $41.6 million. We regularly review our intangible and tangible assets, including goodwill, for impairment. Goodwill and acquired research and development not yet ready for use are subject to impairment review at least annually. Other intangible assets are reviewed for impairment when there is an indication that impairment may have occurred. Impairment testing has led to and may in the future lead to significant additional impairment charges.

We depend upon independent distributors to sell our products to customers. If our distributors do not succeed in selling our products, we may not be able to operate profitably.

We sell our products primarily to independent distributors, including value added resellers (VARs), original equipment manufacturers (OEMs) and system integrators, and are highly dependent upon these distributors' active marketing and sales efforts. We currently have active independent distributors and resellers that sell our products to the end-user customer. Our distribution agreements with our distributors generally are non-exclusive, ranging from one-year agreements to multiple-year duration with no obligation on the part of our distributors to renew the agreements. Our distribution agreements also typically do not prevent our distributors from selling products of our competitors and do not contain minimum sales or marketing performance requirements. As a result, our distributors may give higher priority to products of our competitors or their own products, thereby reducing their efforts to sell our products. In addition, we may not be able to maintain our existing distribution relationships, and we may not be successful in replacing them on a timely basis or at all. We may also need to develop new distribution channels for new products, and we may not succeed in doing so. Any changes in our distribution channels, including a termination or other disruption of our commercial relationship with our distributors, or our inability to establish distribution channels for new products could impair our ability to sell our products and result in a material adverse effect on our business, financial condition and results of operations.

Our solutions generally have long sales cycles, which increase our costs in obtaining orders and reduce the predictability of our earnings.

Our solutions are technologically complex and are typically intended for use in applications that may be critical to the business of our customers. As a result, our pre-sales process is often subject to delays associated with budgetary constraints, lengthy approval and procurement processes that typically accompany the design and testing of new equipment or services. The sales cycles of our solutions to new customers can last for as long as twelve months (and in some cases, for example with carrier customers, even longer) from initial presentation to sale. This long sales cycle results in a delay to our recognition of revenue and results in our need to make significant investments in marketing and sales. Long sales cycles also subject us to risks not usually encountered in a short sales cycle, including our customers' budgetary constraints and internal acceptance reviews and processes prior to purchase. In addition, orders expected in one quarter could shift to another because of the timing of our customers' procurement decisions. Furthermore, customers may defer orders in anticipation of new solutions or product enhancements introduced by us or by our competitors. Such long sales cycles and order deferrals may cause us to keep levels of product inventory that are higher than what we will be eventually able to use, which, over time, may lead to write-offs of such unused product inventory. These factors complicate our planning processes and reduce the predictability of our earnings.

Currency exchange rates and fluctuations of exchange rates could have a material adverse effect on our results of operations.

We are impacted by exchange rates and fluctuations thereof in a number of ways, including:

- A large portion of our expenses in Israel, principally salaries and related personnel expenses, are paid in NIS, whereas most of our revenues are generated in U.S. dollars. When the dollar is weak, our foreign currency denominated expenses will be higher, whereas if the dollar is strong, our foreign currency denominated expenses will be lower. If the NIS strengthens against the U.S. dollar (as happened in 2017), the dollar value of our Israeli expenses will increase and may have a material adverse effect on our business, operating results and financial condition;

- A portion of our international sales are denominated in currencies other than U.S. dollars, such as Euro, Chinese Yuan and Australian Dollar, thereby exposing us to currency fluctuations in such international sales transactions;

- We incur expenses in several other currencies in connection with our operations in Europe and Asia. Devaluation of the U.S. dollar relative to such local currencies causes our operational expenses to increase; and

- The majority of our international sales are denominated in U.S. dollars. Accordingly, devaluation in the local currencies of our customers relative to the U.S. dollar could cause our customers to decrease orders or default on payment.

We generally do not engage in hedging or other transactions intended to manage risks relating to foreign currency exchange rate fluctuations. Consequently, we are exposed to risks related to changes in currency exchange rates and fluctuations of exchange rates, any of which could result in a material adverse effect on our business, financial condition and results of operations. Even if we enter into hedging transactions in the future, they may not effectively protect us from currency exchange rate risks. For a further discussion of the impact on currency exchange rates on our business, see “Item 11. Quantitative and Qualitative Disclosures About Market Risk.”

Undetected defects and errors may increase our costs and impair the market acceptance of our products.

Our products have occasionally contained, and may in the future contain, undetected defects or errors, especially when first introduced or when new versions are released, due to defects or errors that we fail to detect, including in components supplied to us by third parties. These defects or errors may be found after the commencement of commercial shipments. In addition, because our customers integrate our products into their networks with products from other vendors, it may be difficult to identify the product that has caused the problem in the network. Regardless of the source of these defects or errors, we will then need to divert the attention of our engineering personnel from our product development efforts to address the detection and correction of these errors and defects. In the past, we have not incurred significant warranty or repair costs, nor have we been subject to liability claims for material damages related to product errors or defects, nor have we experienced any material lags or delays as a result thereof. However, we cannot assure you that we will not incur these costs or liabilities or experience these lags or delays in the future. Any insurance coverage that we maintain may not provide sufficient protection should a claim be asserted. Moreover, the occurrence of errors and defects, whether caused by our products or the components supplied by another vendor, may result in significant customer relations problems and injure our reputation, thereby impairing the market acceptance of our products.

A shortage of components or manufacturing capacity could cause a delay in our ability to fulfill orders or increase our manufacturing costs.

Our ability to meet customer demands depends in part on our ability to obtain timely deliveries of parts from our suppliers and contract manufacturers. We cannot assure you that we will not encounter supply and fulfillment issues in the future. Although in many cases we use standard parts and components for our products, certain components are presently available to us only from limited sources (see the risk factor below and the discussion under "Business Overview - Manufacturing and Suppliers"). We may not be able to diversify sources in a timely manner, which could harm our ability to deliver products to customers and seriously impact present and future sales.

We may experience a shortage of certain component parts as a result of our own manufacturing issues, manufacturing issues at our suppliers or contract manufacturers, capacity problems experienced by our suppliers or contract manufacturers, or strong demand in the industry for those parts, especially if there is growth in the overall economy. If there is growth in the economy, such growth is likely to create greater pressures on us and our suppliers to accurately project overall component demand and component demands within specific product categories and to establish optimal component levels. If shortages or delays persist, the price of these components may increase, or the components may not be available at all.

We may also encounter shortages if we do not accurately anticipate our needs. We may not be able to secure enough components at reasonable prices or of acceptable quality to build new products in a timely manner in the quantities or configurations needed. Accordingly, our revenues and gross margins could be materially and adversely affected until other sources can be developed.

In addition, our operating results could be materially and adversely affected if we anticipate greater demand than actually develops and we commit to the purchase more components than we actually require. We see this specifically with respect to dated components, which we need to order in large quantities due to manufacturing stoppage. Due to technology advancement, we are required from time-to-time to make “last buy” type of stock purchase of such dated components for our legacy products.

Any disruption in our supply chain could result in a material adverse effect on our business, financial condition and results of operations.

We rely on few vendors to provide our hardware platforms and components for our main accessories. If such vendors are not able to provide us with adequate supplies of these components and platforms on a timely basis and on acceptable terms, our business, financial condition and results of operations could be harmed.

We primarily rely on a few original design manufacturers, or ODMs, for the manufacture and supply of our hardware platforms, with approximately 78% of our direct product costs are from these vendors. In addition, we purchase components for our main accessories from such vendors, whereby we purchase approximately 13% of such accessories from these vendors. If we are unable to continue to acquire from these ODMs and/or components vendors on acceptable terms, or should any of these ODMs and/or components vendors cease to supply us with such platforms or components for any reason, we may not be able to identify and integrate an alternative source of supply in a timely fashion or at the same costs. Any transition to one or more alternate manufacturers would likely result in delays, operational problems and increased costs, and may limit our ability to deliver our products to our customers on time for such transition period, any of which could result in a material adverse effect on our business, financial condition and results of operations.

Our business and operating results could suffer if third parties infringe upon our proprietary technology.

Our success depends, in part, upon the protection of our proprietary software installed in our products, our trade secrets and our trademarks. We seek to protect our intellectual property rights through a combination of trademark and patent law, trade secret protection, confidentiality agreements and other contractual arrangements with our employees, affiliates, distributors and others. In the United States and several other countries, we have registered or acquired trademarks. In addition, we have registered patents in the U.S. and have pending patent applications and provisional patents in connection with several of our products' features.

The protective steps we have taken may be inadequate to deter infringement upon our intellectual property rights or misappropriation of our proprietary information. We may be unable to detect the unauthorized use of our proprietary technology or take appropriate steps to enforce our intellectual property rights. Effective trademark, patent and trade secret protection may not be available in every country in which we offer, or intend to offer, our products. Failure to adequately protect our intellectual property rights could devalue our proprietary content, impair our ability to compete effectively and eventually harm our operating results. Furthermore, defending our intellectual property rights, either by way of initiating intellectual property litigation or defending such, could result in the expenditure of significant financial and managerial resources. For example, in 2018, 2017 and 2016, intellectual property litigation costs amounted to $0.8 million, $2.1 million and $4.3 million, respectively, and continue in 2019 (see "Item 8. Financial Information – Legal Proceedings"). The higher litigation costs in 2016 are mainly associated with the intellectual property litigation trial costs that were incurred at that year. If additional court-room trials result from these litigation disputes, we may incur such additional increased expenses in the future. Moreover, the outcome of such proceedings, if such outcome is negative, could result in devaluation of our proprietary technology and cause an additional significant financial impact which may harm our operating results.

Our products may infringe on the intellectual property rights of others.

Third parties may assert claims that we have violated a patent, trademark, copyright or other proprietary intellectual property right belonging to them. As is characteristic of our industry, there can be no assurance that our products do not or will not infringe the proprietary rights of third parties, that third parties will not claim infringement by us with respect to patents or other proprietary rights or that we would prevail in any such proceedings. We have received in the past, and may receive in the future, communications asserting that the technology used in some of our products requires third-party licenses. Any infringement claims, whether or not meritorious, could result in significant costly litigation or arbitration and divert the attention of technical and management personnel. For example, see the discussion in "Item 8. Financial Information – Legal Proceedings". Any adverse outcome in litigation alleging infringement could require us to develop non-infringing technology or enter into royalty or licensing agreements. If, in such situations, we are unable to obtain licenses on acceptable terms, we may be prevented from manufacturing or selling products that infringe such intellectual property of a third party. An unfavorable outcome or settlement regarding one or more of these matters could have a material adverse effect on our business and operating results.

If our products fail to protect against malicious attacks and our end-users experience security breaches, our reputation and business could be harmed, and our operating results could be adversely impacted.

Defects may cause our products to be vulnerable to security attacks or cause them to fail to help secure networks. Data thieves are increasingly sophisticated, often affiliated with organized crime and operate large-scale and complex automated attacks. In addition, the techniques they use to access or sabotage networks change frequently and generally are not recognized until launched against a target. As a result, our products may be unable to anticipate these techniques and provide a solution in time to protect our end- users' networks. If we fail to identify and respond to new and increasingly complex methods of attack and to update our products to detect or prevent such threats in time to protect our end- users' critical business data, the integrity of our products and reputation as well as our business and operating results could suffer.

In addition, an actual or perceived security breach or theft of sensitive data of one of our end-users, regardless of whether the breach is attributable to the failure of our products or services, could adversely affect the market's perception of our security products. Furthermore, security breaches or product defects in our solutions could result in loss or alteration of customers' data, unauthorized access to multiple customers' data and compromise of our customer's networks secured by our physical and cloud solutions. If such a security breach results in the disruption or loss of availability, integrity or confidentiality of customers' data, we could incur significant liability to our customers and to businesses or individuals whose information was being handled by our customers.

There is no guarantee that our products will be free of flaws or vulnerabilities. Our end- users may also misuse our products, which could result in a breach or theft of business data.

As a security provider, if our internal network system is subject to intentional disruption by cyber attackers or other data thieves, it could, among other things, harm the integrity of our products and the public perception of our products and services and consequently adversely impact our future sales.

We will not succeed with our application and network security solutions unless the marketplace is confident that we provide effective IT security protection. We provide security solutions, and as a result we could be an attractive target of cyber-attacks (including, among others, malware, viruses and attachments to e-mails, and other disruptive activities of individuals or groups) designed to impede the performance of our solutions, penetrate our network security or the security of our cloud platform or our internal systems, misappropriate proprietary information and/or cause other interruptions to our services. Furthermore, third parties may attempt to illegally induce employees or customers into disclosing our proprietary information or otherwise compromise the security of our internal networks, systems or physical facilities in order to gain access to our data or our customers' data. Although we have not identified any act of sabotage or unauthorized access by a third party of our network systems, if we experience an actual or perceived breach of security in our internal systems, it could adversely affect the integrity and market perception of our products and services. Furthermore, the costs to eliminate or address security threats and vulnerabilities before or after a cyber-security incident could be significant. Our remediation efforts may not be successful and could result in interruptions, delays, or cessation of service and loss of existing or potential customers. In addition, any such security breach could impair our ability to operate our business, including our ability to provide maintenance and support services to our customers. If this happens, our revenues could decline and our reputation and business could suffer.

We rely on information systems to conduct our businesses, and failure to protect these systems against security breaches and otherwise to implement, integrate, upgrade and maintain such systems in working order could have a material adverse effect on our results of operations, cash flows or financial condition.

The efficient operation of our businesses depends on our computer hardware and software systems. For instance, we rely on information systems to process customer orders, manage accounts receivable collections, manage accounts payable processes, track costs and operations, maintain client relationships and accumulate financial results. Despite our implementation of industry-accepted security measures and technology, our information systems are vulnerable to and have been in the past subject to computer viruses, attempts to insert malicious codes, unauthorized access, phishing efforts, denial-of-service attacks and other cyber attacks and we expect to be subject to similar attacks in the future as such attacks become more sophisticated and frequent. A breach of our information systems could result in decreased performance, operational difficulties and increased costs, any of which could have a material adverse effect on our business and operating results.

Our non-competition agreements with our employees may not be enforceable. If any of these employees leave us and join a competitor, our competitor could benefit from the expertise our former employees gained while working for us.

We currently have non-competition agreements with most of our employees. These agreements prohibit our employees, in the event they cease working for us, from directly competing with us or working for some of our competitors for a limited period after termination of employment. The laws of the United States, Israel and most other countries in which we have employees may limit or prohibit our ability to enforce these non-competition agreements or may allow us to enforce them only to a limited extent. In the event that we are unable to enforce any of these agreements, competitors that employ our former employees could benefit from the expertise our former employees gained while working for us.

We may be required to pay additional taxes due to tax positions that we undertook. Additional tax liabilities could materially adversely affect our results of operations and financial condition.

We operate our business in various countries, and we attempt to utilize an efficient operating model to optimize our tax payments based on the laws in the countries in which we operate. This can cause disputes between us and various tax authorities in the countries in which we operate, whether due to tax positions that we have taken in various tax returns we have filed or due to determinations we have made not to file tax returns in certain jurisdictions. In particular, not all of our tax returns are final and may be subject to further audit and assessment by applicable tax authorities. There can be no assurance that the applicable tax authorities will accept our tax positions, and if they do not, we may be required to pay additional taxes, as a result of which, our future results may be adversely affected. In the past few years, certain tax authorities which have audited our tax returns have rejected our tax positions and, while we intend to vigorously maintain our positions, we cannot be sure that our positions will be accepted and we may end up paying additional taxes, whether as a result of litigation, if ensued, or settlement negotiations.

In recent years, we have seen changes in tax laws resulting in an increase in applicable tax rates, especially increased liabilities of corporations and limitations on the ability to benefit from strategic tax planning, with these laws particularly focused on international corporations. Such legislative changes in one or more jurisdictions in which we operate may have implications on our tax liability and have a material adverse effect on our results of operations and financial condition. For example, the Organization for Economic Cooperation and Development, or the OECD, an intergovernmental organization with 36 member countries that aims to promote the economic and social well-being of people around the world, introduced the base erosion and profit shifting ("BEPS") project. The BEPS project contemplates changes to numerous international tax principles, as well as national tax incentives, and these changes, if adopted by individual countries, could adversely affect our provision for income taxes. Countries have only recently begun to translate the BEPS recommendations into specific national tax laws, and it remains difficult to predict with accuracy the magnitude of any impact that such new rules may have on our financial results. The U.S. and Israel, among other countries in which we have operations, are members of the OECD.

The adoption of the tax reform and the enactment of additional legislation changing the United States taxation of international business activities could materially impact our financial position and results of operations.

On December 22, 2017, President Trump signed into law what is known as the "Tax Cuts and Jobs Act" (the "TCJA") that significantly reforms the Internal Revenue Code of 1986, as amended (the "Code"). The TCJA, among other things, includes changes to U.S. federal corporate and individual income tax rates. The TCJA makes significant changes to the U.S. tax law which may affect our operations and the impact of these provisions on our operations and our investors is still uncertain and may not become evident for some period of time. Since enactment, the IRS has issued proposed and final regulations, some of which may be further revised and possibly withdrawn, implementing the changes to the U.S. federal tax laws pursuant to the TCJA. The application and implementation of the new provisions may require us to apply the provisions without clear guidance from the U.S. Treasury Department or the Internal Revenue Service ("IRS"). The U.S. Treasury Department and the IRS could interpret or issue guidance on how provisions of the TCJA will be applied or otherwise administered that is different from our interpretation. As part of our compliance with the changes pursuant to the TCJA, we made adjustments to our current provision for income taxes and other items impacted by the TCJA.

The TCJA, among other things, reduces the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, limits the tax deduction for interest expense to 30% of adjusted taxable income (except for certain small businesses), implements a “base erosion anti-abuse tax” which requires U.S. corporations to make an alternative determination of taxable income without regard to tax deductions for certain payments to affiliates, taxes certain non-U.S. corporations’ earnings considered to be “global intangible low taxed income” (also referred to as “GILTI”), repeals the alternative minimum tax, or AMT, for corporations and changes a taxpayer’s ability to either utilize or refund the AMT credits previously generated, changes the attribution rules relating to shareholders of certain “controlled foreign corporations”, limits the deduction for net operating losses carried forward from taxable years beginning after December 31, 2017 to 80% of current year taxable income and eliminates net operating loss carrybacks, imposes a one-time tax on offshore earnings at reduced rates regardless of whether they are repatriated, eliminates U.S. tax on foreign earnings (subject to certain important exceptions), allows immediate deductions for certain new investments instead of deductions for depreciation expense over time, and modifies or repeals many business deductions and credits.

Due to the expansion of our international business activities, any changes in the U.S. taxation of such activities may increase our worldwide effective tax rate and adversely affect our financial position and results of operations. Further, other foreign governments may enact tax laws in response to the TCJA that could result in further changes to global taxation and materially affect our financial position and results of operations. The impact of the TCJA on holders of our securities is uncertain. We therefore recommend our stockholders to consult with their legal and tax advisors with respect to such legislation and the potential tax consequences.

Our bank deposits and investments in Israel are not insured, and our bank deposits in the United States are in excess of insured limits.

The majority of our cash and cash equivalents, and short-term and long-term bank deposits are invested in banks in Israel and, to a smaller extent, in banks in the United States. The Israeli bank deposits are not insured, while the deposits made in the United States are in excess of insured limits and are not otherwise insured. If one or more of these financial institutions were to become insolvent, the loss of these investments would have a material adverse effect on our financial condition.

If we are unable to realize our investment objectives, our financial condition and results of operations may be adversely affected.

We maintain substantial balances of cash and liquid investments, for purposes of acquisitions and general corporate purposes. Our cash, cash equivalents, short-term and long-term bank deposits and marketable securities totaled $401.1 million as of December 31, 2018. The performance of the capital markets affects the values of funds that are held in marketable securities. These assets are subject to market fluctuations and various developments, including, without limitation, rating agency downgrades that may impair their value. We expect that market conditions will continue to fluctuate and that the fair value of our investments may be affected accordingly.

Financial income is a component of our net income (loss). As of December 31, 2018, our investment portfolio, including cash and cash equivalents, deposits and marketable securities, had a carrying value of $401.1 million, compared with $344.3 million as of December 31, 2017. For the years ended December 31, 2018, 2017 and 2016, we had $7.3 million, $4.8 million and $5.7 million, respectively, of financial income.

The outlook for our financial income is dependent, in part, on the future direction of interest rates, exchange rates, the amount of any share repurchases or acquisitions that we make and the amount of cash flows from operations that are available for investment. The performance of the capital markets affects the values of our funds that are held in marketable securities. These assets are subject to market fluctuations and will yield uncertain returns. Due to certain market developments, including investments' rating downgrades, the fair value of these investments may decline. If market conditions continue to fluctuate, the fair value of our investments may be impacted accordingly. Although our investment guidelines stress diversification and capital preservation, our investments are subject to a variety of risks, including risks related to general economic conditions, interest rate fluctuations and market volatility.

In particular, our investment portfolios include a significant amount of interest rate-sensitive instruments, such as bonds, which, in addition to the inherent risk associated with the debt, may be adversely affected by changes in interest rates. Changes in interest rates and credit quality may also result in fluctuations in the income derived from, or the valuation of, our fixed income securities. Interest rates are highly sensitive to many factors, including governmental monetary policies, domestic and international economic and political conditions and other factors beyond our control. For example, benchmark interest rates, such as the U.S. Federal Funds Rate, are currently relatively low, which is likely to significantly impact our investment income. Increases in interest rates will decrease the value of our investments in fixed-income securities. If increases in interest rates occur during periods when we sell investments to satisfy liquidity needs, we may experience investment losses. Conversely, if interest rates decline, reinvested funds will earn less than expected.

In terms of credit risk, our investment portfolio policy is "buy and hold", while minimizing credit risk by setting maximum concentration limit per issuer and credit rating. Our investments consist primarily of government and corporate debentures and bank deposits. Although we believe that we generally adhere to conservative investment guidelines, if turmoil in the financial markets reoccurs in the future, it may result in impairments of the carrying value of our investment assets since we classify our investments in marketable securities as available-for-sale. Changes in the fair value of investments classified as available-for-sale are not recognized as income (loss) during the period, but rather are recognized as a separate component of equity until realized. Realized losses in our investments portfolio may adversely affect our financial position and results. For example, if we had reported all the changes in the fair values of our investments into income (loss), our reported net income would have decreased by $1.1 million during the year ended December 31, 2018 whereas our net loss would have increased by $0.4 million during the year ended December 31, 2017. Any significant decline in our financial income or the value of our investments as a result of continued low interest rates, deterioration in the credit worthiness of the securities in which we have invested, general market conditions or other factors, could have an adverse effect on our results of operations and financial condition.

Our success depends on our ability to attract, train and retain highly qualified research and development, sales, technical, customer support, operations and information technology personnel.

We may need to increase our research and development, sales and marketing, technical, support, operations and information technology staff. Our products require a sophisticated technology, marketing and sales effort targeted at several levels within a prospective customer's organization. Accordingly, we need highly-trained research and development, sales, marketing, technical, customer support, operations and information technology personnel. Competition for such qualified personnel is intense. Consequently, we may not be able to hire or retain sufficient personnel to support our business operations, which could result in a material adverse effect on our business, financial condition and results of operations.

Risks Related to the Market for Our Ordinary Shares

Yehuda Zisapel, our chairman of the board, Nava Zisapel, and Roy Zisapel, our President, Chief Executive Officer and director, may exert significant influence in the election of our directors and over the outcome of other matters requiring shareholder approval.

As of April 12, 2019, Yehuda Zisapel, the Chairman of our Board of Directors, beneficially owned approximately 3.2% of our outstanding ordinary shares; Nava Zisapel, beneficially owned approximately 6.1% of our outstanding ordinary shares; and their son, Roy Zisapel, our President, Chief Executive Officer and director, beneficially owned approximately 3.1% of our outstanding ordinary shares (see "Item 6E – Directors, Senior Management and Employees - Share Ownership"). As a result, if these shareholders act together, they could exert significant influence on the election of our directors and on decisions by our shareholders on matters submitted to shareholder vote, including mergers, consolidations and the sale of all or substantially all of our assets. This concentration of ownership of our ordinary shares could delay or prevent proxy contests, mergers, tender offers, or other purchases of our ordinary shares that might otherwise give our shareholders the opportunity to realize a premium over the then-prevailing market price for our ordinary shares. This concentration of ownership may also adversely affect our share price.

If we are characterized as a passive foreign investment company, our U.S. shareholders may suffer adverse tax consequences.

Generally, if for any taxable year, after applying certain "look through" tax rules, (i) 75% or more of our gross income is passive income, or (ii) at least 50% of the fair market value of our assets, averaged quarterly over our taxable year, are held for the production of, or produce, passive income, we would be characterized as a passive foreign investment company, or PFIC, for U.S. federal income tax purposes. If we are classified as a PFIC, our U.S. shareholders could suffer adverse U.S. tax consequences, including having gain realized on the sale of our ordinary shares treated as ordinary income, as opposed to capital gain income, and having potentially punitive interest charges apply to such gain. Similar rules apply to certain "excess distributions" made with respect to our ordinary shares.

For our 2018 taxable year, we do not believe that we should be classified as a PFIC. There can be no assurance, however, that the IRS will not challenge this treatment, and it is possible that the IRS could attempt to treat us as a PFIC for 2018 and prior taxable years. The tests for determining PFIC status are applied annually, and it is difficult to make accurate predictions of our future income, assets and market capitalization, including the future price of our ordinary shares, all of which are relevant to the PFIC determination. Accordingly, there can be no assurance that we will not become a PFIC in future taxable years. U.S. shareholders should consult with their own U.S. tax advisors with respect to the U.S. tax consequences of investing in our ordinary shares. For a more detailed discussion of the rules relating to PFICs and related tax consequences, please see the section of this annual report entitled “Item 10 – Additional Information – Taxation — United States Federal Income Tax Considerations.”

Provisions of our Articles of Association and Israeli law as well as the terms of our equity incentive plan could delay, prevent or make a change of control of us more difficult or costly, which could depress the price of our ordinary shares.

The provisions in our Articles of Association that provide that our directors, other than our external directors, are elected in three staggered classes by a majority vote of our shareholders may have the effect of delaying or making an unsolicited acquisition of our Company more difficult. Israeli corporate and tax laws, including the ability of our Board of Directors to adopt a shareholder rights plan without further shareholder approval, may also have the effect of delaying, preventing or making an acquisition of us more difficult. For example, under the Companies Law, upon the request of a creditor of either party to a proposed merger, an Israeli court may delay or prevent the merger if it concludes that there is 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, our Key Employee Share Incentive Plan (1997), as amended, or the Share Incentive Plan, provides that in the event of a “Hostile Takeover” (which is defined to include, among others, an unsolicited acquisition of more than 20% of our outstanding shares), the vesting of all or a portion of our outstanding equity awards, including stock options, will accelerate, unless otherwise determined by our Board of Directors (or a committee thereof). As a result, an acquisition of our Company that triggers the said acceleration will be more costly to a potential acquirer. These provisions could cause our ordinary shares to trade at prices below the price for which third parties might be willing to pay to gain control over us. Third parties who are otherwise willing to pay a premium over prevailing market prices to gain control of us may be unwilling to do so because of these provisions. For additional information on this topic, see “Item 6C – Board Practices – Staggered Board,” “Item 6E – Directors Senior Management and Employees – Share Ownership - Key Employee Share Incentive Plan” and “Item 10B – Additional Information – Memorandum and Articles of Association – Mergers and Acquisitions under Israeli Law.”

Our business could be negatively affected as a result of the actions of activist shareholders, and such activism could impact the trading value of our securities.

In recent years, U.S. and non-U.S. companies listed on securities exchanges in the United States have been faced with governance-related demands from activist shareholders, proxy contests and other aggressive tactics. Responding to any action of this type by activist shareholders could be costly and time-consuming, disrupting our operations and diverting the attention of management and our employees. Such activities could interfere with our ability to execute our strategic plans. In addition, a proxy contest for the election of directors at our annual meeting may require us to incur significant legal fees and proxy solicitation expenses and require significant time and attention by management and our board of directors. The perceived uncertainties due to such actions of activist shareholders also could affect the market price of our securities.

Compliance with the disclosure rules regarding the use of conflict minerals may affect our relationships with suppliers and customers.

Pursuant to Section 1502 of the Dodd-Frank Act, United States publicly-traded companies, such as Radware, are required to disclose use or potential use of “conflict minerals” that are mined from the Democratic Republic of Congo or adjoining countries (collectively, “Covered Countries”). Conflict minerals are defined by the SEC as columbite-tantalite (coltan), cassiterite, gold, wolframite, or their derivatives, which are limited to tantalum, tin, and tungsten (“conflict minerals” or “3TG”). These requirements necessitate due diligence efforts to assess whether such minerals are used in our products in order to make the relevant required annual disclosures. These requirements, which were recently implemented, could adversely affect the sourcing, supply and pricing of materials used in our products.

We have conducted an analysis of our products and found that small quantities of 3TG could potentially be found in our products. The products that we manufacture are highly complex, typically containing thousands of parts from many direct suppliers. In general, we primarily rely on third-party assembly and manufacturing vendors to provide our finished products and, in this respect, these vendors typically receive components and subassemblies included in our products from other suppliers and subcontractors. We have relationships with a vast network of suppliers throughout the world and there are generally multiple tiers between the 3TG mines and our direct suppliers. Therefore, we must rely on our direct suppliers to cooperate with us and work with their own upstream suppliers or sub-contractors in order that they may provide us with accurate information about the origin of 3TG in the components we purchase from them. In particular, many of our supplier contracts have fixed durations and we cannot unilaterally impose new contract terms or flow-down requirements that would otherwise compel these suppliers to support our due diligence efforts with respect to 3TG content. Currently, we do not have sufficient information from our suppliers to determine the country of origin of the conflict minerals used in our products or the facilities used to process those conflict minerals. Therefore, we cannot exclude the possibility that some of these conflict minerals may have originated in Covered Countries and are not from recycled or scrap sources.

We may face reputational challenges that could impact future sales (1) based on the fact that we are unable to verify with sufficient accuracy the origins of all conflict minerals used in our products, or (2) if we later determine that certain of our products contain minerals not determined to be conflict free.

Additionally, there are, and will be, ongoing costs associated with complying with these disclosure requirements pursuant to Section 1502 of the Dodd-Frank Act, including due diligence to determine the sources of those minerals that may be used or necessary to the production of our products in order to make the relevant required annual disclosures.

Our share price has decreased significantly in the past and could continue to fluctuate and further decrease in the future.

The market price for our ordinary shares, as well as the prices of shares of other technology companies, has been volatile. For example, during 2018 the lowest closing price of our share was $19.45, compared to the highest closing price of our share of $28.14 during the same year (see also “Item 9A. Offer and Listing Details”). Numerous factors, many of which are beyond our control, may cause the market price of our ordinary shares to fluctuate significantly and further decrease, including:

- fluctuations in our quarterly revenues and earnings and those of our publicly-traded competitors;

- shortfalls in our operating results from levels forecast by securities analysts;

- announcements concerning us or our competitors;

- the introduction of new products and new industry standards;

- changes in pricing policies by us or our competitors;

- general market conditions and changes in market conditions in our industry;

- the general state of the securities market (particularly the technology sector); and

- political, economic and other developments in the State of Israel, the U.S. and worldwide.

Risks Related to Operations in Israel

Security and political and economic instability in the Middle East may harm our business.

We are incorporated under Israeli law and our principal offices and manufacturing and research and development facilities are located in Israel. Accordingly, our operations and financial results could be adversely affected if political, economic and military events curtailed or interrupted trade between Israel and its present trading partners or if major hostilities involving Israel should occur in the Middle East.

Since the establishment of the State of Israel in 1948, a number of armed conflicts have taken place between Israel and its Arab neighbors. A state of hostility, varying in degree and intensity, has led to security and economic problems for Israel. Since late 2000, there has also been a high level of violence between Israel and the Palestinians including during the summer of 2014, when Israel was engaged in armed conflicts with Hamas, a militia group and political party operating in the Gaza Strip. This violence has strained Israel’s relationship with its Arab citizens, Arab countries and, to some extent, with other countries around the world. Since the end of 2010 several countries in the region have been experiencing increased political instability, which led to changes in government in some of these countries and the war in Syria, the effects of which are currently difficult to assess. In addition, Israel faces threats from more distant neighbors, such as Iran (which is believed to be an ally of Hamas in Gaza and Hezbollah in Lebanon) and the militant group known as the Islamic State of Iraq and Syria. This situation may potentially escalate in the future. In addition, this instability in the region may affect the global economy and marketplace. We do not believe that the political and security situation has had a material impact on our business to date; however, there can be no assurance that this will be the case for future operations. We could be adversely affected by any major hostilities, including acts of terrorism as well as cyber-attacks or any other hostilities involving or threatening Israel, the interruption or curtailment of trade between Israel and its trading partners, a significant downturn in the economic or financial condition of Israel or a significant increase in the rate of inflation. Furthermore, some neighboring countries, as well as certain companies, organizations and movements, continue to participate in a boycott of Israeli firms and others doing business with Israel or with Israeli companies as the result of the aforementioned hostilities. No predictions can be made as to whether or when a final resolution of the area’s problems will be achieved or the nature thereof and to what extent the situation will impact Israel’s economic development or our operations.

Some of our directors and officers as well as many of our Israeli employees are obligated to perform annual military reserve duty in Israel. We cannot assess the potential impact of these obligations on our business.

Some of our directors, officers and employees are, unless exempt, obligated to perform annual military reserve duty, depending upon their age and prior position in the army. They may also be subject to being called to active duty at any time under emergency circumstances. Our operations could be disrupted by the absence, for a significant period, of one of more of these officers or other key employees due to military service, and any disruption in our operations could harm our business. The full impact on our workforce or business if some of our officers and employees will be called upon to perform military service, especially in times of national emergency, is difficult to predict.

The exchange rate between the New Israeli Shekel against the U.S. dollar is volatile, and may negatively impact our profitability.

Most of our revenues worldwide are denominated in U.S. dollars or are dollar-linked, whereas a portion of our revenues is denominated in other currencies, including NIS. At the same time, a substantial portion of our expenses is incurred in U.S. dollars, but we incur a portion of our expenses, principally salaries and related personnel expenses, in other currencies, mainly in Israel - in NIS, in Europe - in Euros and in Asia-Pacific - in several local currencies. If the NIS increases in value relative to the dollar, as was the case in 2017, the dollar cost of our operations in Israel will increase and our dollar-measured results of operations will be adversely affected. We cannot provide assurances that we will not be materially adversely affected by exchange rate fluctuations in the future. See also “Currency exchange rates and fluctuations of exchange rates could have a material adverse effect on our results of operations” above in this section.

The tax benefits we may receive in connection with our approved enterprise, beneficiary or preferred enterprise programs require us to satisfy prescribed conditions and may be terminated or reduced in the future. This would increase taxes and decrease our net profit.

We have in the past benefited, and currently benefit from certain government programs and tax benefits in Israel. To remain eligible to obtain such tax benefits, we must continue to meet certain conditions. If we fail to comply with these conditions in the future, the benefits we receive could be canceled and we may have to pay certain taxes. We cannot guarantee that these programs and tax benefits will be continued in the future, at their current levels or at all. If these programs and tax benefits are ended, our tax expenses and the resulting effective tax rate reflected in our financial statements may increase and as such our business, financial condition and results of operations could be materially and adversely affected.

In the event of distribution of dividends from tax-exempt income or in conducting certain transactions that may be viewed by the Israeli tax authorities as a deemed dividend event, the amount distributed will be subject to corporate tax at the rate ordinarily applicable to the approved/ beneficiary enterprise's income. Tax-exempt income generated under the approved/ beneficiary enterprise program will be subject to taxes upon dividend distribution (which includes the repurchase of the Company's shares) or liquidation.

It may be difficult to enforce a U.S. judgment against us or our officers and directors and to assert U.S. securities laws claims in Israel.

We are incorporated under the laws of the State of Israel. Service of process upon us, our Israeli subsidiary, our directors and officers and the Israeli experts, if any, named in this annual report, substantially all of whom reside outside the United States, may be difficult to obtain within the United States. Furthermore, because a majority of our assets and investments, and substantially all of our directors, officers and such Israeli experts are located outside the United States, any judgment obtained in the United States against us or any of them may be difficult to collect within the United States.

We have been informed by our legal counsel in Israel that it may also be difficult to assert U.S. securities law claims in original actions instituted in Israel. Israeli courts may refuse to hear a claim based on an alleged violation of U.S. securities laws reasoning that Israel is not 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. There is little binding case law in Israel addressing these matters. 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.

Subject to specified time limitations and legal procedures, under the rules of private international law currently prevailing in Israel, Israeli courts may enforce a U.S. judgment in a civil matter, including a judgment based upon the civil liability provisions of the U.S. securities laws as well as a monetary or compensatory judgment in a non-civil matter, provided that the following key conditions are met:

- subject to limited exceptions, the judgment is final and non-appealable;
- the judgment was given by a court competent under the laws of the state of the court and is otherwise enforceable in such state;
- the judgment was rendered by a court competent under the rules of private international law applicable in Israel;
- the laws of the state in which the judgment was given provide for the enforcement of judgments of Israeli courts;
- adequate service of process has been effected and the defendant has had a reasonable opportunity to present his arguments and evidence;
- the judgment and its enforcement are not contrary to the law, public policy, security or sovereignty of the State of Israel;
- the judgment was not obtained by fraud and does not conflict with any other valid judgment in the same matter between the same parties; and
- an action between the same parties in the same matter was not pending in any Israeli court at the time the lawsuit was instituted in the U.S. court.

We have obtained benefits from the Israeli Innovation Authority, which subjects us to ongoing restrictions. In addition, these benefits may not continue or in the future may be limited or restricted.

In the past several years, including in 2018, we received grants from the Israeli Innovation Authority (formerly known as the Office of the Chief Scientist of the Israeli Ministry of Economy), or the IIA. We have also received such grants in the past few years and may in the future apply for, non-royalty-bearing grants for research and development programs that meet specified criteria pursuant to the Law for the Encouragement of Research, Development and Technological Innovation, 1984, and the regulations promulgated thereunder, or the R&D Law. The terms of the IIA grants limit our ability to manufacture products or transfer technologies outside of Israel if such products or technologies were developed using know-how developed with or based upon IIA grants. In addition, any non-Israeli who, among other things, becomes an "interested party" in Radware (e.g., becomes a holder of 5% or more of our share capital or voting rights), is generally required to undertake to observe the law governing the grant programs of the IIA, some of the principal restrictions and penalties of which are the transferability limits described above and elsewhere in this annual report.

Further, the IIA grants may be terminated in the future or the available benefits may be reduced or impacted, including, among other possible circumstances, should we transfer IIA funded know how or derivatives thereof and/or manufacturing activities outside the State of Israel, without the IIA’s prior approval. The termination or curtailment of these programs or the loss or reduction of such benefits could have a material adverse effect on our business, financial condition and results of operations. In addition, the IIA may establish new guidelines regarding the R&D Law, which may affect our existing and/or future IIA programs and incentives for which we may be eligible. We cannot predict what changes, if any, the IIA may make.

ITEM 4. INFORMATION ON THE COMPANY

A. History and Development of the Company

Radware Ltd. was organized in May 1996 as a corporation under the laws of the State of Israel and commenced operations in 1997. Our principal executive offices are located at 22 Raoul Wallenberg Street, Tel-Aviv 6971917, Israel and our telephone number is 972-3-766-8666. Our website address is www.radware.com (information contained on our website is not incorporated herein by reference and shall not constitute part of this annual report).

As of September 1, 1998, we established Radware, Inc., a wholly-owned subsidiary in the United States, which conducts the sales and marketing of our products in the Americas and is our authorized representative and agent in the United States. The principal offices of Radware Inc. are located at 575 Corporate Dr., Lobby 2, Mahwah, NJ 07430 and its telephone number is 201-512-9771. We also have several other wholly-owned subsidiaries world-wide handling primarily local support and promotion activities.

In September 1999, we conducted the initial public offering of our ordinary shares and our ordinary shares commenced trading on the Nasdaq.

In December 2005, we acquired the business of V-Secure Technologies, a U.S.-based provider of behavior-based network intrusion prevention solutions. In April 2007, we acquired Covelight, a U.S.-based provider of web channel intelligence technology. In March 2009, we acquired from Nortel certain assets and liabilities related to Nortel's Layer 4-7 Application Delivery Business (Alteon). In May 2011, we established Radyoos Media Ltd., or Radyoos, our majority owned subsidiary, which was engaged in developing and operating a web-based e-commerce platform. In February 2013, we acquired Strangeloop, a Canadian-based provider of web performance acceleration solutions. In January 2017, we acquired Seculert, a company engaged in cyber-attack detection and HTTP analytics solutions and developing user and entity behavioral analysis "UEBA" solutions. In March 2019, we acquired ShieldSquare, an India-based provider of bot mitigation and bot management space.

Recent Major Business Developments

Below is a summary of the major business developments in Radware since January 1, 2018:

- On March 12, 2019, we completed our previously announced acquisition of ShieldSquare.

- On December 31, 2018 we launched a new line of Alteon 9 Series, designed for carriers, mobile operators and large enterprises. The Alteon 9 series is offered with On-demand throughput range of 240 & 320Gbp and SSL performance with support for latest encryption standards (i.e. ECC).

- On October 16, 2018 we announced the introduction of Application Analytics for our Cloud WAF Service. This new feature simplifies management of WAF events by taking a massive volume of raw security alerts and consolidating them into a small, manageable set of recurring user activities, which security administrators can easily address.

- On July 31, 2018 we launched a new line of Alteon 7 Series, designed for carriers, mobile operators and large enterprises. The 7 series is offered with On-demand throughput range of 160 & 200 Gbps and high performance secure sockets layer (SSL) with support for latest encryption standards (i.e. ECC).

- On April 16, 2018 we have joined the Cyber Threat Alliance (CTA), an information and intelligence-sharing forum for the industry's leading cybersecurity practitioners. This is a two-way information sharing forum with CTA members to improve global cybersecurity.

- On April 12, 2018, we introduced a Security Update Subscription for AppWall, our on-premise web application firewall (WAF), which consists of periodic updates, emergency updates and custom filters, which are supported by our own security operations center for vulnerability and exploit detection; security risk assessment; and threat mitigation support services.

- On April 12, 2018, we also introduced ERT Under Attack Service – a backup service for our customers' security operations center (SOC) with an emergency response team (ERT) expert to support during complex attacks with a 10-minute service level agreement (SLA).

- On February 20, 2018, we announced the introduction of the ERT Active Attackers Feed, a subscription on top of our DefensePro base product offering. It provides customers with information pertaining to attack sources recently involved in DDoS attacks. This subscription provides preemptive blocking of attackers before they target the customer's network.

- On January 23, 2018, we announced scrubbing centers capacity expansion, which increases the global mitigation capacity of Radware cloud security network to more than 3.5Tbps of traffic and over 6 billion packets per second (PPS).

For a discussion of our capital expenditures and divestitures, see "Item 5B—Operating and Financial Review and Prospects – Liquidity and Capital Resources."

B. Business Overview

(a) Overview

We are a provider of cyber security and application delivery solutions that help our customers to secure the digital experience for users of business-critical applications in physical, virtual, cloud and software defined data centers (SDDC). Our solutions are deployed by, among others, enterprises, carriers and cloud service providers.

Our solutions are offered in two main categories:

- Products – We offer a range of physical, software-based products, product subscriptions and cloud-based subscriptions (or a combination of these) for enterprise and carrier data centers, as part of their IT and application infrastructure.

- Customer Services ("Services") – We offer technical support, professional services, managed services and training and certification to our customers.

(b) Our Solutions

Our Products

Our physical products and software-based product offering currently consists of the following key products:

- DefensePro Attack Mitigation Device. DefensePro® is a real-time network attack prevention device that protects the user's application infrastructure against network and application downtime, application vulnerability exploitation, malware spread, network anomalies, information theft and other emerging network attacks.

- AppWall Web Application Firewall. AppWall® is our Web Application Firewall (WAF) that is designed to secure the delivery of mission-critical Web applications for corporate networks and in the cloud. AppWall is an ICSA Labs certified WAF that combines positive and negative security models designed to prevent data theft, manipulation of sensitive corporate and customer information and help achieve Payment Card Industry (PCI) compliance.

- DefenseFlow Cyber Command and Control application. DefenseFlow® is a network-wide cyber command and control application that helps service providers to automate network security incidents response. DefenseFlow acts as a cyber-defense control-plane that collects and analyzes multiple sources of security telemetries and, based on this information, applies designated intelligent security actions. DefenseFlow enables service providers to handle large amounts of customers efficiently and with minimal errors.

- Alteon® D Line Application Delivery Controller/Load Balancer. Alteon D Line is our next generation ADC. It provides advanced, end-to-end local and global load balancing capabilities for Web, cloud and mobile based applications. Alteon D Line is designed to guarantee application SLA. Alteon D Line incorporates a set of next-generation services including SSL offloading, FastView Web Performance Optimization (WPO), HTTP/2.0 Gateway, Application Performance Monitoring (APM), AppWall Web Application Firewall (WAF), Authentication Gateway, bandwidth management, and SSL inspection security.

We offer Alteon D-line in three different packages (available on each of its models and throughput levels), to address different deployment scenarios and needs:

- Alteon Deliver: For applications that require high performance ADCs with advanced layer 4-7 ADC functionality.

- Alteon Perform Subscription. For deployments requiring performance optimization, advanced application performance monitoring, global server load balancing, link load balancing and automated/optimized ADC service operation.

- Alteon Secure Subscription. For applications that require our most advanced protection (with an embedded WAF module, authentication gateway) and SSL processing from perimeter security devices (with its embedded SSL inspection module).

o LinkProof NG Multi-homing. LinkProof® NG is a next-generation multi-homing and enterprise gateway solution that allows service level availability and continuous connectivity of enterprise and cloud-based applications. It is an application-aware multi-homing and link load balancing module that delivers 24/7 continuous connectivity and service level assurance, improved performance and cost-effective scalability of bandwidth for corporate and cloud-based applications.

Our product subscription offering currently consists of the following key subscription-based products:

o Security Updates Subscription (SUS). Our SUS service consists of periodic updates, emergency updates, and custom filters (which are supported by our own security operations center for vulnerability and exploit detection); security risk assessment; and threat mitigation support services. The service provides immediate and ongoing security updates to protect customers against the latest threats. The service is available for DefensePro and AppWall products.

o ERT Active Attackers Feed. Our ERT Active Attackers Feed is available on top of our DefensePro base product offering. It provides customers with information pertaining to attack sources recently involved in DDoS attacks. Provided by Radware’s Emergency Response Team (ERT), this feed enhances Radware’s Attack Mitigation Solution and extends the automated, real-time protection provided by Radware’s DDoS mitigation platform, DefensePro, enabling preemptive blocking of attackers before they target the customer’s network.

o Alteon Global Elastic License (GEL). Alteon GEL is a new type of architecture and solution subscription that captures complete application lifecycle for large ADC deployments. GEL includes purchasing, provisioning and dynamic capacity management of ADC services for applications hosted in the cloud and on-premises. This new application delivery licensing model helps eliminate planning risks in the purchase and deployment of application delivery services across business’ private datacenters and cloud environments, while improving investment protection.

- APSolute Vision. APSolute Vision is the network management tool and network monitoring tool for the Radware family of cyber security and application delivery solutions. It provides our customers immediate visibility to health, real-time status, performance and security of our products from one central, unified console (even if the customer has multiple data centers).

- MSSP Portal. A turnkey, multi-tenant DDoS detection and mitigation service portal. The Portal collects and aggregates security attack measurement and events (including traffic utilization, attack distribution and alerts) and displays them in real-time and historical reports.

Our Cloud-based subscriptions currently consists of the following key subscriptions:

- Cloud DDoS Protection Service. Our Cloud DDoS Protection Services provide a full range of enterprise-grade DDoS protection services in the cloud. Based on our DDoS protection technology, it aims to offer organizations wide security coverage, accurate detection and short time to protect from today’s dynamic and evolving DDoS attacks. We offer a multi-vector DDoS attack detection and mitigation service, handling attacks at the network layer, server-based attacks, and application-layer DDoS attacks. The solution includes protection against volumetric and non-volumetric attacks, SYN flood attacks, "low & slow" attacks, HTTP floods, SSL-based attacks and more.

Our Cloud DDoS Service is offered in multiple deployment options to meet an organization’s specific needs:

§ Always-On Cloud DDoS Protection Service - provides always-on protection where traffic is always routed through Radware's cloud security POPs (Points of Presence) with no on-premises device required for detection and mitigation. Recommended for organizations that have applications hosted in the cloud or those that are not able to deploy an on-premises attack mitigation device in their data center.

§ Always-On Cloud DDoS Protection Service / Hybrid Protection - For companies that place a high premium on the user experience and wish to avoid even the slightest possible downtime as a result of DDoS attacks, the optimal solution is to deploy an always-on cloud DDoS protection service together with an on-premise hardware appliance. This helps ensure that services are protected against any type of attack, at all times.

§ On-Demand Cloud DDoS Protection Service - protects against Internet pipe saturation and is activated when the attack threatens to saturate the organization’s Internet pipe. Recommended for organizations that are looking for the lowest cost solution and are less sensitive to real-time detection of DDoS attacks.On-Demand Cloud DDoS Protection Service / Hybrid Protection – integrates with our on-premise Attack mitigation device – DefensePro - in the customer’s data center.

§ Cloud WAF Service. Our Cloud WAF Service provides enterprise-grade, continuously adaptive web security protection and is based on our ICSA Labs certified web application firewall. Cloud WAF includes full coverage of OWASP Top-10 threats, advanced attacks and zero-day attack protection. It automatically adapts the protections to evolving threats and protected assets. Our Global Content Delivery Network (CDN) Service is also available as an add-on to our Cloud WAF Service customers.

Customer Services

We offer technical support, professional services, managed services and training and certification to our customers. Our key customer services currently consist of the following:

o Certainty Support Program. We offer technical support for all our products through the Certainty Support Program. Certainty support levels include:

o Basic - Provides business day access including weekends from 9am to 5pm (local time) to technical support center services and technical documentation, either via the Web, e-mail or direct phone support during working days. New software releases are available for units covered under the certainty support program.

o Standard - This level increases access to the technical support center 24/7/365 and adds next business day replacement of failed hardware and waives customer shipping costs.

o Advanced - Increases certainty support level standard to 4 hours' replacement of failed hardware advanced replacement

o Professional Services. Our professional services group is staffed by a global team of experts possessing extensive knowledge and experience in security and application delivery both in data centers and the cloud. The group offers a full range of services to design, implement, automate and optimize our customer solutions. We offer the following key services:

o Design and Planning. Plan and design applications for future growth with Radware engineers. The service starts with a review of business goals, network optimization assessment and overview of application architecture and security requirements to help create a comprehensive deployment plan that is tailored to organizational IT requirements.

o Application and Security Optimization Services. Analyze and review the current implementation and design and provide recommendations to help optimize the system and achieve business goals.

o Resident Engineer. Our Resident Engineer service is a proactive on-site engineer who performs operations, design and automation activities. From initial deployment to ongoing management and day-to-day operation, our resident engineer decreases the time demands on our customer’s staff, allowing them to focus on their core business.

- o Technical Account Manager (TAM). Our technical account manager (TAM) is a proactive consultant that implements best practices, provides guidance and optimizes networking and application resources.

- o ERT Managed Service. Our ERT offers a fully managed network and application security service. The service is provided 24x7 by security experts and covers a broad range of attack types from different forms of denial-of-service to a variety of application attacks against the customer's servers or data centers. It includes immediate response, onboarding, consulting, remote management and reporting.

- o ERT Under Attack Service. The ERT Under Attack Service provides 24/7 access to a security expert within 10 minutes – one of the industry's fastest SLA. The ERT engineer will take the lead, fight attacks off and provide post-mortem analysis of security events. The ERT Under Attack Service lets organizations know there is someone to rely on, guaranteeing support throughout the attack lifecycle from the moment it begins. The ERT experts are available 24x7x365 and assists large enterprises worldwide with complex multi-vector attacks against their networks, data centers and application services.

<u>Recent Product Activities</u>

During 2018, our key activities regarding our products and services offering consisted of the following:

- We have launched the ERT Active Attackers Feed, a subscription on top of our DefensePro base product offering. It provides customers with information pertaining to attack sources recently involved in DDoS attacks. Provided by Radware's Emergency Response Team (ERT), this feed enhances Radware's Attack Mitigation Solution and extends the automated, real-time protection provided by Radware's DDoS mitigation platform, DefensePro, enabling preemptive blocking of attackers before they target the customer's network.

- We have launched new lines of Alteon 7 and 9 Series, designed for carriers, mobile operators and large enterprises. The Alteon 7 series is offered with On-demand throughput range of 160 & 200 Gbps and high performance SSL with support for latest encryption standards (i.e. ECC). The 7 series supports 100GbE, 40GbE, 25GbE and 10GbE traffic ports. The Alteon 9 series is offered with On-demand throughput range of 240 & 320Gbp and superior SSL performance with support for latest encryption standards. The 9 series supports 100GbE, 40GbE and 10GbE traffic ports.

- We have released Alteon versions 31 and 32 adding new features to improve solution visibility, feature set and ease of use. The main features including:

  - Application Dashboard and Reporting. The new Application Dashboard provides insights into the application health and performance data, allowing our customers to proactively plan capacity, troubleshoot and detect anomalies. It provides real-time monitoring dashboard and historical reports engine.

  - Global Elastic License Usage Dashboard. The GEL Usage Dashboard allows customers to easily monitor the entitlement usage and discover if it is underutilized or approaching maximum capacity.

  - SSL Inspect Solution. We have further developed a few new capabilities for SSL Inspection such as support of non-HTTPS protocols using STARTTLS (SMTP, IMAP and POP3), AUTHTLS (FTP) as well as inspection of generic TCP application over TLS (implicit TLS).

  - Inbound SSL Inspection Wizard. A wizard for quick and easy configuration of an inbound SSL Inspection solution.

  - Alteon Cluster on Azure. The Alteon VA application cluster solution is an application-oriented solution that adjusts itself according to the load of the application, optimizing the cost of cloud services.

  - Real Server Auto Scaling support on AWS and VMware. Alteon VA support for real server auto scaling when running in cloud environment including Amazon Web Service (AWS) and VMware.

- We have released DefensePro version 8.15 adding new features to improve the security coverage including:

  - Burst-Attack Protection. Burst attacks, also known as hit-and-run DDoS, use repeated short bursts of high-volume attacks at random intervals. Each short burst may last just a few seconds and may reach hundreds of gigabits of throughput per second. DefensePro Automatically creates a signature to block attack traffic and allows legitimate traffic to pass through.

  - Traffic Filters. Traffic Filters complement the DefensePro protections with additional manual control to block or rate-limit traffic that matches specified values.

- We have released Cloud DDoS Protection Service Versions 10 and 11. With a growing customer demand for self-service capabilities, better visibility and flexibility, these versions provide many enhancements and improvements by extending the Cloud DDoS Protection self-service capabilities, enriching the user experience and visibility, and improving the service flexibility:

  - Self-service Onboarding Procedure – a fully automated new account creation and provisioning of customer sites and assets, without requiring human intervention.

  - Visibility: Automatic incident reports are generated following each diversion of traffic to the scrubbing centers; Account Service Plan is now provided per user displaying service plans details, purchased protection plan, protection service type, service model, number of sites and assets purchased and used, and the service start date;

- We have released Cloud WAF Service Versions 18 and 3.7 that focus on ease-of-use, self-service and visibility. The new enhancements and features include:

  - Application Analytics that aggregate and group events into application activities for improved readability and handling;

  - Alert on Certificate Expiration when an SSL certificate configured on the Radware Cloud WAF is about to expire;

  - Reseller Account dashboard, to allow displaying multiple accounts information such as activity status and account expiration, and provision new accounts;

  - Policy Distribution feature, allowing copying and distributing security-policy configurations from one application to other applications;

  - Attack Geo Map – a new feature that shows the geographical origin of the attacks with ability to drill down into detailed security events per location for further investigation and analysis.

- We have continued our investment in the OEM agreement with Cisco for our cyber-security solutions: we have, added our cloud DDoS Protection services portfolio and Cloud WAF services into Cisco global price list. Cisco customers can now purchase our cloud WAF and Cloud DDoS Protection services directly from Cisco in addition to our virtual DefensePro that is available for Cisco's next generation Firewalls (Firepower 4100 series and Firepower 9000 series).

- We have continued our investment in the OEM agreement with Check Point: we have upgraded Check Point DDoS Protector version to DefensePro version 8; we have added Cloud WAF, Cloud DDoS Protecting services into Check Point' offering; we have added Alteon models into Check Point' offering to offer on-premises WAF, SSL offloading and SSL Inspection capabilities – all available now for Check Point customers directly from Check Point.

(c) Our Competitive Strengths and Strategies

Our Core Assets

Our solutions incorporate proprietary and innovative cyber security and application delivery technologies that help our customers to secure the digital experience for users of business-critical applications. We believe our competitive strengths are based on the following key elements:

- Innovation, proprietary technologies and thought leadership. We are offering innovative solutions in our domain: we were one of the first companies to offer hybrid attack mitigation solutions; behavioral DDoS attacks detection with automated real-time signature creation for attack mitigation; device fingerprinting technology implementation for advanced Bot-based attacks detection and auto-policy generation for our WAF solution. We believe this has given us significant expertise, know-how and leadership in the market for cyber-attack mitigation solutions and we take part in many technology communities, standard organizations and open source projects. At the same time, we continue to invest in research and development of cyber security and application delivery technologies in order to introduce new and innovative solutions, which are supported and protected by multiple patents and proprietary rights.

- Industry Awards. We gained multiple industry awards during 2018 including: Forrester DDoS Wave Leader, Forrester WAF Wave Strong Performer, Gartner Magic Quadrant for WAF –visionary vendor; Gartner Magic Quadrant for Firewalls -Cisco named a Leader with Radware DefensePro VA; 2018 Winner of Cloud Computing Product of the Year; Quadrant Solutions - 2018 Company of the Year in Global DDoS Mitigation Market; Frost & Sullivan (India) - 2018 WAF Vendor of the Year.

- Global presence. We have more than 12,500 customers worldwide and have global sales, support and marketing capabilities. For example, we offer global cloud and service infrastructure based on multiple service centers dispersed globally through service data centers in Europe, Asia, North America, South America, Africa and Australia. We currently have local presence in 30 local offices, subsidiaries or branches globally, across Asia-Pacific, Europe and the Americas. As such, our Technical Assistance Centers (TAC) are located to provide 24/7 support service to our customers. We offer services from a global network of Cloud Security Service centers consisting of 11 large scrubbing centers (SC) and a global network of 24 Points-of-Presence (POP) nodes focused on application attacks for our Cloud WAF service. The global network distribution includes:

  - North America: four SCs (Las Vegas, Ashburn, San Jose and Dallas) and 12 POPs (Atlanta, Ashburn, Chicago, Dallas, Las Vegas, Seattle, Montreal, Toronto, San Jose, Raleigh, Azure West, Azure East);

  - Latin America: one POP (Sao Palo, Brazil);

- EMEA: three SCs (London, Frankfurt, Johannesburg) and seven Pops (Frankfurt, London, Paris, Milan, Oslo, Capetown and Tel Aviv); and

- Asia and Australia: four SCs (Tokyo, Hong Kong, Seoul, and Sydney) & six Pops (Chennai, Sydney, Seoul, Singapore, Tokyo & Hong Kong).

- Strategic relationships. We have global technology partner alliances with leading vendors such as Cisco Systems, Inc., Check Point Software Technologies Ltd., Hewlett Packard Enterprise HPE, Nokia Corp, IBM, VMware, Inc., and Symantec Corporation. We believe these relationships enable us to increase our market reach as well as offer prospects with higher solutions value.

- Customers. Our customers include top-tier banks, stock exchanges, carriers, cloud service providers, internet service providers, retailers and higher-education institutions. We believe this portfolio of high profile customers demonstrates the advantage and recognition of our solution offerings.

Our Growth Strategy

Our growth strategy is based on several key elements:

- Focus on data center solutions. Focus on developing and selling holistic cyber security and application delivery solutions for data centers and cloud applications.

- Continue investing in cloud and security. We aim to offer superior and innovative security solutions and cloud-based solutions and expand our portfolio in these two dimensions. We also intent to invest in go-to-market efforts related to cloud and security.

- Increase our market footprint. We believe that a significant market opportunity exists to sell our solutions with the complementary products and services provided by other organizations with whom we wish to collaborate. To that end, we have already established strategic relationships with various third parties, including leading global-class partners, such as Check Point, Cisco and Nokia. We intend to further increase our market footprint through OEMs, global system integrations and collaboration with leading cloud and content defined network (CDN) providers.

- Pursue acquisitions and investments. In order to achieve our business objectives, we may evaluate and pursue the acquisition of, or significant investments in, other complementary companies, technologies, products and/or businesses that enable us to enhance and increase our technological capabilities and expand our product and service offerings.

(d) Sales and Marketing

Sales. We market and sell our products primarily through indirect sales channels that consist of distributors and resellers located in the Americas (including the U.S., Canada and Central and Latin America), Europe, Africa, Asia and Australia. In addition, we generate direct sales to select customers mainly in the United States. Our direct sales channels are supported by our sales and marketing managers who are also responsible for recruiting potential distributors and resellers and for initiating and managing marketing projects in their assigned regions. The sales managers are supported by our internal sales support staff that help generate and qualify leads for the sales managers. As of December 31, 2018, we had a total of 182 sales and marketing personnel, of which 68 persons were employed in the Americas with locations in various countries, mainly in the United States. We have subsidiaries and representative offices and branches in several countries (see Item 4.C. – Organizational Structure), which promote and market our products and provide customer support in their respective regions.

Marketing. Our marketing strategy is to enhance brand recognition and maintain our reputation as a provider of technologically advanced, quality cyber security and application delivery solutions to help drive demand for our products. We seek to build upon our marketing and branding efforts globally to achieve greater worldwide sales. Our sales force and marketing efforts are principally directed at developing brand awareness, generating demand and providing support to our distributors/resellers to promote sales. We participate in major trade shows, regionally-based events/seminars and offer support to our distributors and resellers who participate in these events. We also participate in Cisco-related initiatives such as Cisco Live and Cisco Connect events, where we are reaching out to Cisco customers and partners, and joint Radware-Cisco events such as Hacker Challenges. We also invest in online and search engine advertising campaigns, global public relations and regionalized field marketing campaigns. In addition to our independent marketing efforts, we invest in joint marketing efforts with our distributors, VARs and other companies that have formed strategic alliances with us.

We have entered into co-marketing and reseller arrangements with companies in other complementary sectors in order to broaden our customer base by selling joint solutions comprised of such complementary products. As an example, application vendors may sell our Alteon® to their customers in conjunction with their application in order to load-balance and optimize the application availability and performance. We established such co-marketing and reseller arrangements with, among others: Check Point Software Technologies Ltd.; Cisco Systems Inc.; Nokia Networks; NEC Corporation; Ericsson Inc.; Verint Americas, Inc.; Microsoft Corporation; Hewlett Packard Enterprise; IBM. However, there is no assurance that the above co-marketing and strategic alliance agreements would result in a substantial increase in our revenues.

Strategic Alliances and OEM Agreements. We have entered into strategic alliances and OEM agreements with other software and hardware vendors, as well as mutual channel information sharing arrangements, where products can either be branded with our name or the vendor’s name. We believe that these companies have significant customer relationships and offer products which complement our products.

For example, we entered into an agreement with Check Point Software Technologies Ltd., whereby certain of Check Point’s appliances will be based on our attack mitigation solutions and in 2018, we expanded the relationship to include reselling of our Alteon appliances for security use cases, and our Cloud DDoS and Cloud WAF services. In 2015, we entered into an OEM agreement with Cisco for DDoS Mitigation, providing our virtual DefensePro software for certain Cisco firewall products, and in 2018 we expanded our offering available via Cisco to include our virtual Alteon appliances for security use cases, and our Cloud DDoS and Cloud WAF services. In early 2017, our strategic relationship with Nokia was expanded to include the reselling of our security solutions as part of Nokia’s offerings to carriers.

We plan to further invest in the development of strategic alliances in order to provide greater access to our target markets and enhance our brand name. We have also entered into OEM agreements with several software vendors, in which we incorporate such vendors' software into our products to create additional value to our customers.

(f) Customers and End-Users

With the exception of our limited direct sales to selected customers, we sell our products through distributors or resellers who then sell our products to end users.

We have a globally diversified end-user base, consisting of corporate enterprises, including banks, insurance companies, manufacturing and retail companies, government agencies and media companies, and service providers, such as telecommunication carriers, internet service providers, cloud service providers and application service providers. Customers in these different vertical markets deploy Radware products for availability, performance and security of their applications from headquarters to branch offices.

In 2018, approximately 44% of our sales were in the Americas (principally in the United States), 32% were in Europe, Middle East and Africa ("EMEA") and 24% in Asia-Pacific, compared to 46%, 27% and 27%, respectively, in 2017, and 43%, 27% and 30%, respectively, in 2016. Other than the United States and Germany, which accounted for 36% and 10%, respectively, of our total revenues in 2018, no other single country accounted for more than 10% of our sales for 2018.

In 2018, approximately 50% of our sales derived from product sales and 50% derived from service sales, compared to 56% and 44%, respectively in 2017 and 2016. This reflects our product installed base that drives a demand for our support and managed services and maintenance, as well as continuous transition to product subscription based solutions as opposed to sales of physical based only solutions.

In 2018, approximately 69% of our sales derived from the enterprise market and 31% derived from the carrier market, compared to approximately 66% and 34%, respectively, in 2017 and 69% and 31%, respectively, in 2016.

As of December 31, 2018, 2017 and 2016, no single customer accounted for more than 10% of our sales or more than 10% of our trade receivables balance.

For additional details regarding the breakdown of our revenues by geographical distribution and by activity, see “Item 5A – Operating and Financial Review and Prospects – Operating Results”.

(g) Seasonality

Our quarterly operating results have been, and are likely to continue to be, influenced by seasonal fluctuations in our sales and by seasonal purchasing patterns of some of our customers. Some of our customers plan their annual purchasing budget at the beginning of each year which causes operating results in our first quarter of the year to be typically lower than other quarters. In addition, our operating results in the fourth quarter tend to be higher than other quarters as some of our customers tend to make greater capital and operational expenditures as well as expenditures relating to service renewals towards the end of their own fiscal years, thereby increasing orders for our products, support and subscription services in the fourth quarter.

(h) Customer Support Services

Our technical team, which consisted of 230 employees worldwide as of December 31, 2018, supports our sales force during the sales process, assists our customers and distributors with the initial installation, set-up and ongoing support of our products, trains distributors and customers to use our products and provides software updates and product upgrades for our products. In addition, our technical team trains and certifies our distributors to provide limited technical support in each of the geographical areas in which our products are sold and is directly responsible for remote support. Our Certainty Support Program provides offerings which allow customers to automatically obtain new software versions of their products and obtain optimized performance by purchasing any of the following optional offerings: extended warranty, software updates, 24x7 help-desk (directly to our customers and through our distributors), on-site support and unit replacement. Some of our on-site services are provided by third party contractors.

(i) Research and Development

We place considerable emphasis on research and development to expand the capabilities of our existing products, develop new products and improve our existing technologies and capabilities. We believe that our future success will depend upon our ability to maintain our technological expertise, enhance our existing products and introduce, on a timely basis, new commercially viable products that will continue to address the needs of our customers. Accordingly, we intend to continue devoting a significant portion of our personnel and financial resources to research and development. In order to identify market needs and to define appropriate product specifications, as part of the product development process we seek to maintain close relationships with current and potential distributors, customers and vendors in related industry sectors.

As of December 31, 2018, our research and development staff consisted of 316 employees and 56 subcontractors. Research and development activities take place mainly at our facilities in Israel, Vancouver, Canada; and North Carolina, United States and our sub-contractor in Bangalore, India. We employ established procedures for the required management, development and quality assurance of our new product developments. Our research and development organization is divided into Security, Application Delivery, Management and Analytics and CTO groups. Within those groups the organization is divided according to our existing product solutions. Each product group is headed by a group leader and includes team leaders and engineers. Each group has a dedicated quality assurance team. In addition, we have an infrastructure department responsible for the development of our platforms which are the basis for all products, serving all product groups, which consist of a senior group leader, group leaders, team leaders, and engineers. The heads of all research and development divisions report to either the Chief Operating Officer or the Chief Technology Officer.

See also below under "Government Regulations – Israeli Innovation Authority.”

(j) Manufacturing and Suppliers

Our quality assurance testing, final integration, packaging and shipping operations as well as part of our final assembly activities are primarily performed at our facility in Jerusalem, Israel. All of our products are Underwriters Laboratories (UL) and ISO 9001:2008 compliant and some of them have also achieved significant industry certifications, such as DefensePro (for the Common Criteria Evaluation & Validation Scheme (CCEVS) EAL4+ through the National Security Agency (NSA) program) and AppWall (ICSA certification for Web Application Firewall).

We rely on third-party manufacturing vendors to provide our finished products. In this respect, these vendors primarily provide us with manufacturing assembly services in order to deliver the finished goods while we perform the final integration of the products. All components and subassemblies included in our products are supplied to the manufacturing vendors by several suppliers and subcontractors. Each of the manufacturing vendors monitors each stage of the components production process, including the selection of components and subassembly suppliers. Thereafter, each of the manufacturing vendors makes the final assembly in their own facility. Our primary manufacturing vendors are ISO 9001 certified, indicating that each of their manufacturing processes adhere to established quality standards.

In 2018, we primarily relied on three ODMs to manufacture and to supply our hardware platforms, whereby approximately 51% of our direct product costs were from one of these vendors and 27% were from the other vendors. There are also two additional vendors from whom we buy components for main accessories – in 2018, we purchased 10% of such accessories from one of these vendors and 3% from the other.

We conduct a business continuity plan (BCP) with all our vendors to ensure an immediate recovery in case of crisis that might jeopardize the supply of our products. However, if we are unable to continue to acquire those platforms or components from these platform manufacturers and vendors on acceptable terms, or should any of these suppliers cease to supply us with such platforms or components for any reason, we may not be able to identify and integrate an alternative source of supply in a timely fashion or at the same costs. Any transition to one or more alternate suppliers would likely result in delays, operational problems and increased costs, and may limit our ability to deliver our products to our customers on time for such transition period, although we believe we have levels of inventory that will assist us to transition to alternate suppliers smoothly.

(k) Proprietary Rights

We rely on patent, trademark and trade secret laws, as well as confidentiality agreements and other contractual arrangements with our employees, distributors and others to protect our technology. We have a policy that requires our employees to execute employment agreements, including confidentiality and non-competition provisions.
We have registered trademarks for, among others, Radware®; Radware Logo: ®; OnDemand Switch®; Alteon®; APSolute®; LinkProof®; DefensePro®; CID®; SIPDirector®; AppDirector®; AppXcel®; AppXML®; AppWall®; APSolute Insite®; Triangulation®; SmartNat®; StringMatch Engine®; Web Server Director®; Fireproof®; SecureFlow®; APSolute Vision®; VAdapter®; vDirect®; Alteon VA®; AppShape®; FastView®; DefenseFlow®; TeraVIP®; Virtual Director®; DefensePipe®;"ADC Fabric®"; CyberStack® and "Virtual DefensePro® and we have trademark applications pending for, among others, "ADC-VX"™; VADI™ (Virtual Application Delivery Infrastructure) and "Inflight"™, ". We own registered U.S. copyrights in all of our primary software product lines.

We have registered patents in the United States and Canada for, among others, our triangle redirection method used for the global load balancing in our AppDirector product; our mechanism for efficient management and optimization of multiple links used in our LinkProof product; our method for load balancing by global proximity used in our AppDirector product; our method for controlling traffic on links between autonomous Border Gateway Protocol (BGP) systems; the stateful distribution of copied SSL traffic; the transparent inspection of encrypted client traffic; our passive monitoring and event detection mechanisms used for business event monitoring in our Inflight product; the activation of multiple virtual services on a switching platform; the behavioral analysis and detection of zero-day and DoS network attack patterns in our DefensePro product; our hypertext transfer protocol (HTTP) DoS attack mitigation behavioral mechanisms in our DefensePro; a geographically based traffic distribution; a generic proximity based site selection for global load balancing; an internal hardware connectivity plane architecture; a specific proximity based site selection for global load balancing of HTTP transactions implemented in our Alteon products; and additional patents in the SDN field, around a new concept of cyber control and automation for our DefenseFlow Product.

We have pending patent applications and provisional patents in connection with several methods and features used in our products or that we plan to implement in the future, such as advanced algorithms for cyber detection defending against new kinds of attacks (Burst and IoT related attacks, detection of attacks within AWS etc.), cloud WAF and WAF in general, patent applications around the cyber control and automation (DefenseFlow) and around ADC for SDDC adapted for containerized environments. In 2018, we continued to add new capabilities covered by such patent applications to our lines of security, namely new algorithms to fight against new attack surfaces resulting from IoT, and added new capabilities to defeat application floods against workloads that are hosted in public clouds such as AWS and Azure. Our patent applications allowed us extended the surface of the DefenseFlow to control, manage and automate attack mitigation across all domains: scrubbing centers, enterprise data-centers and cloud data-centers. The notion of DefenseFlow client was extended to DetectPro which has been develop as a software based programmable detector with flexible form factors and deployment modes, to extend our detection footprints across new domains such as: micro-perimeters and edge-compute. Furthermore, in 2018 we filed applications for new patents regarding our machine learning capabilities to defend against cloud native attacks and risks. These new patent applications are in the context of our new Cloud Workload Protection (CWP) product. Another domain that we have added new capabilities covered by patent applications is integration of our Alteon load-balancer with micro-services. We have integrated Alteon as a front-end service to automatically learn the Kubernetes eco-system and auto-configure itself based on the ever-changing containerized application environment. These applications may not result in any patent being issued, and, if issued, the patents may not provide adequate protection against competitive technology and may not be held valid and enforceable if challenged. In addition, other parties may assert rights as inventors of the underlying technologies, which could limit our ability to fully exploit the rights conferred by any patent that we receive. See "Item 8. Financial Information – Legal Proceedings" for a discussion of intellectual property litigation. Our competitors may be able to design around a patent we receive and other parties may obtain patents that we would need to license or circumvent in order to exploit our patents.

The protective steps we have taken may be inadequate to deter misappropriation of our technology and information. We may be unable to detect the unauthorized use of, or take appropriate steps to enforce, our intellectual property rights. Some of the countries in which we sell our products do not protect intellectual property to the same extent as the United States and Israel. In addition, our competitors may independently develop technologies that are substantially equivalent or superior to our technology. Any licenses for intellectual property that might be required for our services or products may not be available on reasonable terms.

(l) Competition

The cyber security and application delivery market is highly competitive and we expect competition to intensify in the future. We may lose market share if we are unable to compete effectively with our competitors, which include equipment manufacturers and service providers.

Our principal competitors are:

o Equipment manufacturers (DDoS Protection): Netscout Systems Corp. (through Arbor Networks); and A10 Networks, Inc.

o Equipment manufacturers (ADC): F5 Networks, Inc., or F5; Citrix Systems, Inc.; and A10 Networks, Inc.

o Equipment manufacturers (WAF): Imperva; F5.

o Cloud service providers (DDoS protection and Cloud WAF): Akamai (Prolexic and Kona); Imperva (through Incapsula, Inc.) and Neustar.

o Cloud service providers (ADC): Amazon Web Services; Microsoft Azure.

We expect to continue to face additional competition as new participants enter the market or extend their portfolios into related technologies. Larger companies with substantial resources, brand recognition and sales channels may also form alliances with or acquire competing providers of application delivery or application and network security solutions and emerge as significant competitors.

Competition may result in lower prices or reduced demand for our products and a corresponding reduction in our ability to recover our costs as well as increased costs associated with sales and marketing expenses to maintain or increase market share which may impair our ability to increase profitability. Furthermore, the dynamic market environment, which is demonstrated by the above acquisitions, poses a challenge in predicting market trends and expected growth. We believe that our success will depend primarily on our ability to provide more technologically advanced and cost-effective application delivery and application and network security solutions, and more responsive customer service and support, than our competitors. However, we cannot assure you that the products we offer will compete successfully with those of our competitors. Furthermore, should competition intensify, we may have to reduce the prices of our products which will negatively impact our business and financial condition. See also above under "Business Overview – Our Competitive Strengths and Strategies".

(m) Government Regulations

Environmental Regulations

Our activities in Europe require that we comply with European Union Directives with respect to product quality assurance standards and environmental standards. The "RoHs" and RoHs II Directives require products sold in Europe to meet certain design specifications, which exclude the use of hazardous substances. Directive 2002/96/EC on Waste Electrical and Electronic Equipment (known as the "WEEE" Directive) requires producers of electrical and electronic equipment to register in different European countries and to provide collection and recycling facilities for used products. We are currently in compliance with the RoHs and WEEE regulations and ISO 14001 standards (re Environmental Management Systems).

Israeli Innovation Authority

From time to time, eligible participants may receive grants under programs of the IIA. Grants received are generally repaid through a mandatory royalty based on revenues from the sale of products (and ancillary services) incorporating know-how developed, in whole or in part, with the grants. This governmental support is conditioned upon the participant's ability to comply with certain applicable requirements and conditions specified in the IIA's programs and the R&D Law.

Under the R&D Law, research and development programs that meet specified criteria and are approved by the Research Committee of the IIA are eligible for grants usually of up to 66% of certain approved expenditures of such programs, as determined by said committee. In exchange, the recipient of such grants is required to pay the IIA royalties from the revenues derived from products incorporating know-how developed within the framework of each such program or derived therefrom (including ancillary services in connection therewith), up to an aggregate of 100% of the dollar-linked value of the total grants received in respect of such program, plus interest.

The R&D Law also provides that know-how developed under an approved research and development program or rights associated with such know-how (1) may not be transferred to third parties in Israel without the approval of the IIA (such approval is not required for the sale or export of any products resulting from such research or development) and (2) may not be transferred to any third parties outside Israel, except in certain special circumstances and subject to the IIA's prior approval, which approval, if any, may generally be obtained, subject to payment of a transfer fee pursuant to which the grant recipient pays to the IIA a portion of the sale price paid in consideration for such IIA-funded know-how; or a portion of the consideration paid in respect of licensing the IIA-funded know-how, as the case may be (according to certain formulas, which may result in repayment of up to 600% of the grant amounts plus interest). Under certain circumstances, such as in the event that the grant recipient receives know-how from a third party in exchange for its IIA-funded know-how, such transfer fee would not apply.

The R&D Law imposes reporting requirements with respect to certain changes in the ownership of a grant recipient. The law requires the grant recipient and its controlling shareholders and foreign interested parties to notify the IIA of any change in control of the recipient or a change in the holdings of the means of control of the recipient and requires a non-Israel interested party to undertake to the IIA to comply with the R&D Law. In addition, the rules of the IIA may require additional information or representations in respect of certain of such events. For this purpose, "control" is defined as the ability to direct the activities of a company other than any ability arising solely from serving as an officer or director of the company. A person is presumed to have control if such person holds 50% or more of the means of control of a company. "Means of control" refers to voting rights or the right to appoint directors or the chief executive officer. An "interested party" of a company includes a holder of 5% or more of its outstanding share capital or voting rights, its chief executive officer and directors, someone who has the right to appoint its chief executive officer or at least one director, and a company with respect to which any of the foregoing interested parties owns 25% or more of the outstanding share capital or voting rights or has the right to appoint 25% or more of the directors. Accordingly, any non-Israeli who acquires 5% or more of our ordinary shares will be required to notify us that it has become an interested party and to sign an undertaking to comply with the R&D Law.

The Israeli authorities have indicated in the past that the government may further reduce or abolish the IIA grants in the future. Even if these grants are maintained, we cannot presently predict what would be the amounts of future grants, if any, that we might receive. In addition, an amendment to the R&D Law that became effective on January 1, 2016, provides the IIA with authority to establish new guidelines regarding the R&D Law, which may affect our existing and/or future IIA programs and incentives for which we may be eligible. We cannot predict what changes, if any, the IIA may make.

During 2012-2014 we received grants from the IIA to fund certain other research and development projects as part of our participation in the MAGNET Consortium Program, which is a program that sponsors innovative generic industry-oriented technologies to strengthen the country's technological expertise and enhance competitiveness. These grants do not bear any royalty repayment obligations. In 2012, 2013 and 2014 we received $0.3 million, $0.4 million, and $0.3 million respectively, in IIA grants under such MAGNET programs.

In 2018 and 2017, we were qualified to participate in three projects funded by the IIA to develop generic technology relevant to the development of our products. We were eligible to receive grants constituting between 30% and 50% of certain research and development expenses relating to these projects. The grants under these projects are not required to be repaid by way of royalties. Grants for the years ended December 31, 2018 and 2017 were $ 0.7 million and $ 0.6 million, respectively.

C. Organizational Structure

We have a wholly-owned subsidiary in the United States, Radware Inc., which conducts the sales and marketing of our products in the United States. We also have subsidiaries in Australia, France, Germany, the United Kingdom, Italy, Spain, Japan, Singapore, Korea, Canada, India, Israel, China and Hong Kong, most of which typically conduct the sales and marketing of our products in their respective locations. We have also established representative offices in Taiwan. Our subsidiaries include:

Name of Subsidiary	Country of Incorporation
Radware Inc.	New Jersey, United States of America
Radware UK Limited	United Kingdom
Radware France	France
Radware Srl	Italy
Radware GmbH	Germany
Nihon Radware KK	Japan
Radware Australia Pty. Ltd.	Australia
Radware Singapore Pte. Ltd.	Singapore
Radware Korea Ltd.	Korea
Radware Canada Inc.	Canada
Radware India Pvt. Ltd.	India
Kaalbi Technologies Limited Ltd.	India
Radware China Ltd.	China
Radware (Hong Kong) Limited	Hong Kong
Radyoos Media Ltd.*	Israel
Radware Canada Holdings Inc.	Canada
Radware Iberia, S.L.U.	Spain

* We own 91% of this subsidiary which ceased its activities during 2017. All other listed subsidiaries are wholly owned.

Yehuda Zisapel, one of our co-founders and shareholders, is the Chairman of our Board of Directors and the father of Roy Zisapel, our President, Chief Executive Officer and director. Individually or together with his brother, Zohar Zisapel, and with Nava Zisapel, Yehuda Zisapel is also a founder, director and/or principal shareholder of several other companies which, together with our Company and our subsidiaries listed above are known as the RAD-Bynet Group. These companies include, among others:

AB-NET Communications Ltd.
Binat Business Ltd.
BYNET Data Communications Ltd.
BYNET Electronics Ltd.
BYNET SEMECH (outsourcing) Ltd.
Bynet Software Systems Ltd.
Bynet System Applications Ltd.
Ceragon Networks Ltd.
Internet Binat Ltd.
Nuance Hearing Ltd.
Packetlight Networks Ltd.
Rad-Ace Ltd.
RAD-Bynet Properties and Services (1981) Ltd.
Radbit Computers, Inc.
Radcloud Ltd.
RADCOM Ltd.
RAD Data Communications Ltd.
Radiflow Ltd.
RADWIN Ltd.
SecurityDam Ltd.
Silicom Ltd.

The RAD-Bynet Group also includes several other holdings, real estate companies, biotech and pharmaceutical companies and the above list does not constitute a complete list of the holdings of Messrs. Yehuda and Zohar Zisapel.

In addition to engaging in other businesses, members of the RAD-Bynet Group are actively engaged in designing, manufacturing, marketing and supporting data communications products, none of which currently compete with our products. Some of the products of members of the RAD-Bynet Group are complementary to, and may be used in connection with, our products. See also “Item 7B – Major Shareholders and Related Party Transactions - Related Party Transactions”.

D. Property, Plants and Equipment

General. We operate from leased premises mainly in Tel Aviv and Jerusalem in Israel and New Jersey in the United States. We also lease premises in several locations in Europe and Asia-Pacific for the activities of our subsidiaries, representative offices and branches. Our aggregate annual rent expenses under these leases were approximately $6.0 million in 2018 compared to $6.2 million in 2017.

We believe that the following offices and facilities are suitable and adequate for our operations as currently conducted and as currently foreseen. In the event that additional or substitute offices and facilities are required, we believe that we could obtain such offices and facilities at commercially reasonable rates.

Israel. Our headquarters and principal administrative, finance, research and development and marketing operations are located in approximately 100,000 square feet of leased office space in Tel Aviv, Israel, in two buildings: one, consisting of approximately 40,000 square feet, with a lease expiring in June 2020. These facilities are leased from companies owned by Yehuda, Nava and Zohar Zisapel; and the second consisting of approximately 60,000 square feet, with a lease expiring in June 2020. These facilities are partially owned and leased (in equivalent proportions) from companies owned by Yehuda, Nava and Zohar Zisapel. For more information see – “Item 7 - Major Shareholders and Related Parties Transactions.”

In addition, we lease approximately 3,600 square feet of space in Jerusalem for development facilities from a company owned by Yehuda, Nava and Zohar Zisapel. The lease expires in August 2020. We also sublease approximately 15,000 square feet for warehousing in Jerusalem from a company owned by Yehuda, Nava and Zohar Zisapel. The lease expires in August 2019. For more information, see “Item 7 - Major Shareholders and Related Parties Transactions.”

Other locations. In the United States, we lease approximately 16,900 square feet of property, consisting of approximately 12,700 square feet of office space and 4,200 square feet of warehouse space, in Mahwah, New Jersey from a company owned by Yehuda, Nava and Zohar Zisapel. The lease expires in December 2025. For more information, see – “Item 7 - Major Shareholders and Related Party Transactions.”

We lease approximately 3,850 square feet of property for our research and development facilities in North Carolina, the lease for which will expire in March 2026. In addition, we lease approximately 5,700 square feet of property in Sunnyvale, California, the lease for which will expire in December 2021.

We lease facilities for the operation of our subsidiaries and representative offices in several locations in Europe and Asia-Pacific, all from unrelated third parties.

ITEM 4A. UNRESOLVED STAFF COMMENTS

None.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

Our discussion and analysis of our financial condition and results of operation are based upon our consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States. Our operating and financial review and prospects should be read in conjunction with our financial statements, accompanying notes thereto and other financial information appearing elsewhere in this annual report.

A. Operating Results

Overview

We are a provider of cyber security and application delivery solutions designed to secure the user digital experience for business-critical applications in virtual, cloud and software defined data centers. Our solutions are deployed by enterprises, carriers and cloud service providers. We began sales in 1997, and currently have 30 local offices, subsidiaries or branches globally, across Asia-Pacific, Europe and the Americas.

We sell through sales channels such as resellers and distributors whereas most of our direct sales are to strategic customers.

Most of our revenues are generated in dollars or are dollar-linked and the majority of our expenses are incurred in dollars and, as such, the dollar is our functional currency. Our consolidated financial statements are prepared in dollars and in accordance with U.S. GAAP.

We recognize revenues in accordance with Accounting Standards Update No. 2014-09, or ASC 606, "Revenue from Contracts with Customers (Topic 606)" ("ASC 606")", when (or as) it satisfies performance obligations by transferring promised products or services to our customers in an amount that reflects the consideration we expect to receive. We determine revenue recognition through the following steps: (1) identify the contract with a customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract, and (5) recognize revenue when (or as) a performance obligation is satisfied.

Our revenues are derived from sales of our products and services:

- We recognize physical product revenues when control of the product is transferred to the customer (i.e., when our performance obligation is satisfied), which typically occurs at shipment and we recognize revenues from product subscriptions, as part of the product revenues, ratably over the subscription period.

- Revenues from post-contract customer support (PCS), which represents mainly, help-desk support and unit repairs or replacements, professional services and ERT services, are recognized ratably over the contract or subscription period, which is typically between one year and three years.

We operate in one reportable market segment and our revenues are attributed to geographic areas based on the location of the end-users.

In the years ended December 31, 2018, 2017 and 2016, revenues derived from sales of the Company's products constituted approximately 50%, 56% and 56%, respectively, of our total revenues, with the remaining revenues being derived from services. A significant portion of our revenues is derived from repeat product sales to existing customers, and we expect that repeat product sales will continue to account for a significant portion of such revenues in the future.

On January 30, 2017, we acquired Seculert. The consideration to acquire Seculert was $10 million in cash and additional contingent consideration of up to $10 million, based on certain milestones to be achieved. The derived goodwill from this acquisition was attributable to additional capabilities of the Company to expand its products portfolio. Goodwill generated from this business combination was primarily attributable to synergies between the Company's and Seculert's respective products and services. During 2018, we agreed with the sellers that the R&D milestone was achieved which resulted a payment of $ 1.4 million. For the year ended December 31, 2018 we recorded a benefit of $0.2 million in the general and administrative in order to reduce the contingent consideration fair value to nil.

With respect to the Seculert acquisition, we recorded $7.1 million, $2.2 million and $2.1 million for In Process Research and Development (IPR&D), technology and goodwill, respectively. The estimated useful life of the IPR&D and technology is approximately 9 years.

For our recording of our IPR&D, technology and goodwill and estimated payments of the contingency milestones see also Note 1(c) and Note 4 to our consolidated financial statements included elsewhere in this annual report.

Critical Accounting Policies

In many cases, the accounting treatment of a particular transaction is specifically dictated in U.S. GAAP and does not require management's judgment in its application. There are also areas in which management's judgment in selecting among available alternatives would produce a materially different result. Our management has reviewed these critical accounting policies and related disclosures with our Audit Committee. See note 2 to our consolidated financial statements included elsewhere in this annual report, which contains additional information regarding our accounting policies and other disclosures required by U.S. GAAP.

Our management believes that the significant accounting policies which affect its more significant judgments and estimates used in the preparation of its consolidated financial statements and which are the most critical to aid in fully understanding and evaluating our reported financial results include the following:

- Revenue recognition;
- Deferred contract costs;
- Investment in marketable securities;
- Goodwill;
- Stock-based compensation; and
- Income taxes.

Revenue Recognition. We recognize revenues in accordance with ASC 606. As such, we identify a contract with a customer, identify the performance obligations in the contract, determine the transaction price, allocate the transaction price to each performance obligation in the contract and recognize revenues when (or as) we satisfy a performance obligation. We derive revenues mainly from sales of products and services:

- Revenues from physical products and software-based products are recognized upon shipment when control of the promised goods is transferred to the customer, generally when the product has been delivered. Revenues from product subscriptions, included as product revenues, are recognized ratably, on a straight-line basis, over the subscription period.

- Revenues from customer support, which represents mainly, help-desk support and unit repairs or replacements, professional services and ERT services, are recognized ratably, on a straight-line basis, over the term of the related contract, which is typically between one year and three years. Renewals of support contracts create new performance obligations that are satisfied over the term with the revenues, recognized ratably, on a straight-line basis, over the renewed period.

Our products are sold partially through distributors and resellers, all of which are considered end-users.

Revenue is measured based on consideration specified in a contract with a customer, and excludes taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction, that we collect from a customer.

We do not assess whether a contract has a significant financing component if the expectation, at contract inception, is such that the period between payment by the customer and the transfer of the promised goods or services to the customer will be one year or less.

We enter into contracts that can include multiple performance obligations. We account for individual products and services separately if they are distinct – i.e., if a product or service is separately identifiable from other items in the contract and if a customer can benefit from it on its own or with other resources that are readily available to the customer. We allocate the transaction price to each performance obligation based on the relative standalone selling price (“SSP”). If the SSP is not observable through past transactions, we estimate the SSP by considering several external and internal factors including, but not limited to, pricing practices including discounting, margin objectives and competition. For PCS, we determine the standalone selling price based on the price at which we separately sell a renewal contract. For product revenues, we determine the standalone selling prices by taking into account available information such as historical selling prices, geographic location, and the Company's price list and discount policy by using a consistent percentage of our product price lists, in the same territories and markets when sold separately.

We record a provision for estimated sale returns and stock rotation granted to customers on products in the same period the related revenues are recorded in accordance with ASC 606. These estimates are based on historical sales returns, stock rotations and other known factors. Such provisions amounted to $ 1.5 million and $1.7 million as of December 31, 2018 and 2017, respectively.

Deferred revenues include unearned amounts received under post-contract customer support and subscription agreements, and are classified in short and long-term based on their contractual term. Deferred revenues amounts which represent uncollected amounts are offset against account receivables.

Deferred Contract Costs. We capitalize sales commission as costs of obtaining a contract when they are incremental and if they are expected to be recovered. Our contracts include performance obligations related to various goods and services, some of which are satisfied at a point in time and others over time. Commission costs related to performance obligations satisfied at a point in time are expensed at the time of sale, which is when revenue is recognized. Commission costs related to long-term service contracts and performance obligations satisfied over time are deferred and recognized on a systematic basis that is consistent with the transfer of the goods or services to which the asset relates. Sales commissions paid for new contracts, which are not commensurate with sales commissions paid for renewal contracts, are capitalized and amortized over an expected period of benefit. We apply judgment in estimating the amortization period, by taking into consideration our customer contract terms, history of renewals, expected length of customer relationship, as well as the useful life of the underlying technology and products. Accordingly, we determined the expected period of benefit to be approximately 3.2 years. Amortization expense is included in Sales and Marketing expenses in the accompanying consolidated statements of income (loss). Deferred commission costs capitalized are periodically reviewed for impairment. For costs that the we would have capitalized and amortized over one year or less, we have elected to apply the practical expedient and expense these contract costs as incurred.

Upon adoption of ASC 606 on January 1, 2018, deferred commissions costs included within other long-term assets in our consolidated balance sheets, were $10.2 million, out of which $5.1 million of commissions expenses were recognized during the year ended December 31, 2018. Deferred commission costs capitalized during the year ended December 31, 2018 were $9.3 million, out of which $ 1.7 million were recognized during the year ended December 31, 2018.

As of December 31, 2018, the deferred commission costs capitalized is $12.6 million and included within other long-term assets in the consolidated balance sheets. There was no impairment loss in relation to deferred commission costs capitalized.

Investment in Marketable Securities. We account for investments in marketable securities in accordance with Accounting Standards Codification, or ASC No. 320, "Investments- Debt and equity Securities". Management determines the appropriate classification of our investments at the time of purchase and reevaluates such determinations at each balance sheet date.

We classified all of our debt securities as available-for-sale securities. Available-for-sale securities are carried at fair value, with the unrealized gains and losses reported in "accumulated other comprehensive income (loss)" in shareholders' equity. Realized gains and losses on sales of investments are included in financial income, net and are derived using the specific identification method for determining the cost of securities.

The amortized cost of debt securities is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization together with interest and dividends on securities are included in financial income, net.

We recognize an impairment charge when a decline in the fair value of our investments below the cost basis is judged to be other-than-temporary. The 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 are deemed other-than-temporarily impaired, the amount of impairment recognized in the statement of income (loss) is limited to the amount related to credit losses, while impairment related to other factors is recognized in other comprehensive income (loss). During the years 2018, 2017 and 2016, we did not record any other-than-temporary impairment loss with respect to our marketable securities.

Goodwill. Goodwill represents the excess of the purchase price in a business combination over the fair value of the net tangible and intangible assets acquired. Under ASC 350 "Intangibles – Goodwill and Other" ("ASC 350"), goodwill is not amortized, but rather is subject to an annual impairment test. ASC 350 requires goodwill to be tested for impairment at least annually or between annual tests in certain circumstances, and written down when impaired. Goodwill is tested for impairment by comparing the fair value of the reporting unit with its carrying value.

ASC 350 allows an entity to first assess qualitative factors to determine whether it is necessary to perform the two-step quantitative goodwill impairment test. If the qualitative assessment does not result in a more likely than not indication of impairment, no further impairment testing is required. If it does result in a more likely than not indication of impairment, the two-step impairment test is performed. Alternatively, ASC 350 permits an entity to bypass the qualitative assessment for any reporting unit and proceed directly to performing the first step of the goodwill impairment test.

We operate in one operating segment, and this segment comprises our single reporting unit. We perform assessment of qualitative factors during the fourth quarter of each fiscal year, or more frequently if impairment indicators are present. This analysis determined that no indicators of impairment existed for 2018, 2017 and 2016.

Stock-based compensation. We account for stock-based compensation in accordance with ASC No. 718, "Compensation-Stock Compensation" (“ASC 718”) ASC 718 requires companies to estimate the fair value of equity-based payment awards on the date of grant using an option-pricing model. The value of the portion of the award that is ultimately expected to vest is recognized as an expense over the requisite service periods in our consolidated statement of income (loss).

We recognize compensation expenses for the value of our awards based on the accelerated attribution method over the requisite service period of each of the awards, net of estimated forfeitures. Estimated forfeitures are based on actual historical pre-vesting forfeitures. We adopted ASU 2016-09 in the first quarter of fiscal year 2017. We elected to retain its existing accounting policy and estimate expected forfeitures.

On January 1, 2017, we adopted Financial Accounting Standards Board ("FASB") Accounting Standards Update ("ASU") No. 2016-09 (Topic 718) Compensation - Stock Compensation: Improvements to Employee Stock-Based Payment Accounting, which simplifies several aspects of the accounting for stock-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, forfeiture, statutory tax withholding requirements, and classification on the statement of cash flows.

We selected the Black-Scholes-Merton option pricing model to account for the fair value of our stock-options awards with only service conditions and whereas the fair value of the restricted stocks awards is based on the market value of the underlying shares at the date of grant. During 2018, we granted potential shares to be issued for performance share awards, subject to a market condition based on the performance of the Company's stock price to our Chief Executive Officer. The fair value of this award was determined using a Monte Carlo simulation methodology. The Monte Carlo simulation model utilizes multiple input variables that determine the probability of satisfying the market condition stipulated in the award and calculates the fair value of each award.

The option-pricing models requires a number of assumptions, of which the most significant are the expected stock price volatility and the expected option term. Expected volatility was calculated based upon actual historical stock price movements over an historical period equivalent to the option's expected term. The expected option term represents the period of time that options are expected to be outstanding. Expected term of options is based on historical experience. The risk-free interest rate is based on the yield from U.S. treasury bonds with an equivalent term. We have historically not paid dividends and have no foreseeable plans to pay dividends.

We accounted for changes in award terms as a modification in accordance with ASC 718. A modification to the terms of an award should be treated as an exchange of the original award for a new award with total compensation cost equal to the grant-date fair value of the original award plus the incremental value measured at the same date.

During 2016, we approved the repricing of 667,750 stock options for several employees and senior management, previously granted under the Stock Option Plans. As a result, the exercise price of the options was lowered to a price per share lower than the original grant exercise price, but a higher price than the known share’s closing price on Nasdaq on the modification date. There was no change in the number of shares subject to each option, vesting or other terms of the options. The incremental expense for the repricing of the options is approximately $1.2 million. We recorded expenses associated with the repricing of $0.2 million and $0.4 million for the years ended December 31, 2018 and 2017 respectively.

Income Taxes. We account for income taxes in accordance with ASC No. 740, "Income Taxes". This statement prescribes the use of the liability method whereby deferred tax assets and liability account balances are determined based on differences between financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. We provide a valuation allowance, if necessary, to reduce deferred tax assets to their estimated realizable value if it is more likely than not that a portion or all of the deferred tax assets will not be realized. Deferred tax liabilities and assets are classified as non-current in accordance with Accounting Standard Update, or ASU, No. 2015-17 (see also Note 2(ab) to our consolidated financial statements included elsewhere in this annual report). ASC No. 740 contains a two-step approach to recognizing and measuring a liability for uncertain tax positions. The first step is to evaluate the tax position taken or expected to be taken in a tax return by determining if the weight of available evidence indicates that it is more likely than not that, on an evaluation of the technical merits, the tax position will be sustained on audit, including resolution of any related appeals or litigation processes. The second step is only addressed if the first step has been satisfied (i.e. the position is more likely than not to be sustained) otherwise a full liability in respect of a tax position not meeting the more likely than not criteria is recognized. The second step is to measure the tax benefit as the largest amount that is more than 50% likely to be realized upon ultimate settlement. We accrue interest and penalty, if any related to unrecognized tax benefits in its taxes on income. Although we believe we have adequately reserved for our uncertain tax positions, no assurance can be given that the final tax outcome of these matters will not be different. We adjust these reserves in light of changing facts and circumstances, such as the closing of a tax audit, the refinement of an estimate or changes in tax laws. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences will impact the provision for income taxes in the period in which such determination is made. The provision for income taxes includes the impact of reserve provisions and changes to reserves that are considered appropriate, as well as the related interest and penalties.

Accounting for tax positions requires judgments, including estimating reserves for potential uncertainties. We also assess our ability to utilize tax attributes, including those in the form of carry forwards for which the benefits have already been reflected in the financial statements. We do not record valuation allowances for deferred tax assets that we believe are more likely than not to be realized in future periods. While we believe the resulting tax balances as of December 31, 2018 and 2017 are appropriately accounted for, the ultimate outcome of such matters could result in favorable or unfavorable adjustments to our consolidated financial statements and such adjustments could be material. See Note 12 to our consolidated financial statements included elsewhere in this annual report for further information regarding income taxes. We have filed or are in the process of filing local and foreign tax returns that are subject to audit by the respective tax authorities. The amount of income tax we pay is subject to ongoing audits by the tax authorities, which often result in proposed assessments. See "Results of Operations – Taxes" below.

While we believe that we have adequately provided for any reasonably foreseeable outcomes related to tax audits and settlement, our future results may include favorable or unfavorable adjustments to our estimated tax liabilities in the period the assessments are made or resolved, audits are closed or when statutes of limitation on potential assessments expire.

New Accounting Pronouncements Not Yet Effective

In February 2016, the Financial Accounting Standards Board, or the FASB issued ASU 2016-02. ASU 2016-02 changes the current lease accounting standard by requiring the recognition of lease assets and lease liabilities for all leases, including those currently classified as operating leases. The standard establishes a right-of-use model ("ROU") that requires a lessee to recognize a ROU asset and lease liability on the balance sheets for all leases. The guidance is effective for the interim and annual periods beginning on or after December 15, 2018, and we adopted the standard on January 1, 2019. A modified retrospective transition approach is required, applying the new standard to all leases existing at the date of initial application. The standard provides a number of optional practical expedients in transition. To adopt this new standard, we implemented changes to its existing systems and processes in conjunction with a review of existing vendor agreements.

We expect that the adoption of the standard will result in the recognition of ROU assets and lease liabilities of approximately $18.9 million to $23.1 million at January 1, 2019, with the most significant impact from recognition of ROU assets and lease liabilities relating to leases of our office premises. Our financial income, net will also be impacted by the revaluation of the lease liabilities in non-U.S. dollar denominated currencies.

In January 2017, the FASB issued ASU No. 2017-04, “Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment.” ASU 2017-04 eliminates step two of the goodwill impairment test and specifies that goodwill impairment should be measured by comparing the fair value of a reporting unit with its carrying amount. Additionally, the amount of goodwill allocated to each reporting unit with a zero or negative carrying amount of net assets should be disclosed. ASU 2017-04 is effective for annual or interim goodwill impairment tests performed in fiscal years beginning after December 15, 2019; early adoption is permitted. We do not expect that this new guidance will have a material impact on our consolidated financial statements.

In August 2018, the FASB issued ASU 2018-15, "Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract." The new standard requires capitalization of the implementation costs incurred in a cloud computing arrangement that is a service contract, with the requirements for capitalization costs incurred to develop or obtain internal-use software. Capitalized implementation costs will be required to be amortized over the term of the arrangement, beginning when the module or component of the cloud computing arrangement that is a service contract is ready for its intended use. The standard will be effective beginning January 1, 2020, with early adoption permitted. We are evaluating the impact of adopting this new accounting guidance on our consolidated financial statements.

Recently Issued Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (“FASB”) issued a new standard related to revenue recognition. Under the standard, revenue is recognized when a customer obtains control of promised goods or services in an amount that reflects the consideration the entity expects to receive in exchange for those goods or services. In addition, the standard requires disclosure of the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers.

We adopted ASU No. 2014-09 utilizing the modified retrospective method for all open contracts on the date of initial application. The cumulative impact of applying the new guidance to all contracts with customers that were not completed as of January 1, 2018 was recorded as an adjustment to retained earnings as of the adoption date. Results for reporting periods beginning after January 1, 2018 are presented under ASC 606, while prior period amounts are not adjusted and continue to be reported under the accounting standards in effect for the prior periods. As a result, the following adjustments were made to accounts on the consolidated balance sheet; a decrease in the trade receivables of $0.2 million, an increase in the other long-term assets of $10.2 million related to the costs to obtaining customer contracts and a decrease of $2.5 million in the net deferred tax assets.

See Note 2(l) to our consolidated financial statements included elsewhere in this annual report for information regarding recent accounting standards issued.

Results of Operations

The following discussion of our results of operations for the years ended December 31, 2018, 2017 and 2016, including the following tables, which present selected financial information data in dollars and as a percentage of total revenues, are based upon our statements of operations contained in our financial statements for those periods, and the related notes, included in this annual report.

The following table sets forth, for the periods indicated, certain financial data concerning our operating results:

	2018	2017	2016
	(U.S. $ in thousands)		
Revenues:			
Products	$118,062	$117,968	$110,186
Services	116,342	93,401	86,399
	234,404	211,369	196,585
Cost of revenues:			
Products	30,803	30,862	27,320
Services	10,872	8,754	8,375
	41,675	39,616	35,695
Gross profit	192,729	171,753	160,890
Operating expenses, net:			
Research and development, net	57,674	59,003	51,732
Sales and marketing	111,386	108,744	103,774
General and administrative	16,145	17,577	18,133
Other income	-	(6,900)	-
Total operating expenses	185,205	178,424	173,639
Operating income (loss)	7,524	(6,671)	(12,749)
Financial income, net	7,274	4,830	5,741
Income (loss) before taxes on income	14,798	(1,841)	(7,008)
Taxes on income	3,063	5,652	1,651
Net income (loss)	11,735	(7,493)	(8,659)

The following table sets forth, for the periods indicated, certain financial data expressed as a percentage of our total revenues:

	2018	2017	2016
Revenues:			
Products	50 %	56 %	56 %
Services	50	44	44
	100	100	100
Cost of Revenues:			
Products	13	15	14
Services	5	4	4
	18	19	18
Gross profit	82	81	82
Operating expenses, net:			
Research and development, net	25	28	26
Sales and marketing	47	51	53
General and administrative	7	8	9
Other income	-	(3)	-

Total operating expenses	79	84	88
Operating income (loss)	3	(3)	(6)
Financial income, net	3	2	3
Income (loss) before taxes on income	6	(1)	(3)
Taxes on income	(1)	(3)	(1)
Net income (loss)	5 %	(4)%	(4)%

Comparison of Years Ended December 31, 2018, 2017 and 2016

Revenues.

Our revenues are derived from sales of our products and services. We recognize product revenue upon shipment when control of the promised goods is transferred to the customer, generally when the product has been delivered. Revenues from product subscriptions, included as product revenues, are recognized ratably over the subscription period. Revenues from post-contract customer support, which represent mainly help-desk support, unit repairs or replacements, professional services and ERT services are recognized ratably over the contract period. For additional details regarding the manner in which we recognize revenues, see the discussion under the caption "Critical Accounting Policies - Revenue Recognition" above.

Revenues in 2018 were $234.4 million compared with revenues of $211.4 million in 2017, an increase of 11%.

Revenues in 2017 were $211.4 million compared with revenues of $196.6 million in 2016, an increase of 7.5%.

The following table provides a breakdown of our revenues (dollars in thousands) by type of revenues both in dollars and as a percentage of total revenues for the past three fiscal years, as well as the percentage change between such periods:

	2018		2017		2016		% Change 2018 vs. 2017	% Change 2017 vs. 2016
Products	118,062	50 %	117,968	56 %	110,186	56 %	0 %	7 %
Services	116,342	50 %	93,401	44 %	86,399	44 %	25 %	8 %
Total	234,404	100%	211,369	100%	196,585	100%	11 %	8 %

The following table shows a breakdown of our total revenues (dollars in thousands) by geographical distribution both in dollars and as a percentage of total revenues for the past three fiscal years, as well as the percentage change between such periods:

	2018		2017		2016		% Change 2018 vs. 2017	% Change 2017 vs. 2016
North, Central and South America (principally the United States)(*)	102,491	44 %	97,901	46 %	84,733	43 %	5 %	16 %
EMEA (Europe, the Middle East and Africa)	75,750	32 %	56,589	27 %	53,724	27 %	34 %	5 %
Asia-Pacific	56,163	24 %	56,879	27 %	58,128	30 %	(1)%	(2)%
Total	234,404	100%	211,369	100%	196,585	100%	11 %	8 %

(*) For the years ended December 31, 2018, 2017 and 2016, our revenues from the United States were $83.0 million, $78.5 million and $68.0 million, respectively, representing 35%, 37% and 35% of total revenues for these years, respectively.

Other than the United States and Germany, no other single country accounted for more than 10% of our sales for the years ended December 31, 2018.

Other than the United States no other single country accounted for more than 10% of our sales for the years ended December 31, 2017 and 2016.

In 2018, our product revenues remained approximately in the same level as in 2017. This reflects a continuous transition to product subscription based solutions as opposed to sales of physical based only solutions.

In 2018, our service sales increased by 25% to $116.3 million, compared to $93.4 million in 2017. This increase in service sales is attributed to renewals of existing support contracts and sales of new support contracts as well as a result of our product installed base that drives a demand for our support, managed services and maintenance.

During 2018, our revenues from the enterprise market represented approximately 69%, whereas revenues from the carrier market represented approximately 31% of our revenues, compared to 66% and 34%, respectively, in 2017.

Our revenues in the Americas increased in 2018 by 5% compared to 2017, mainly due to greater demand for cloud-based security solutions. Revenues from the EMEA region increased in 2018 by 34% compared to 2017 mainly due to increase sales of our security solutions. Revenues in Asia-Pacific region decreased in 2018 by 1% compared to 2017.

In 2017, our product revenues increased by 7%, to $118.0 million, compared to $110.2 million in 2016. The increase in our product revenues is mainly attributed to an increase in our product sales and greater contribution from our previous years' subscription deferred revenues which matured into revenues in 2017.

In 2017, our service sales increased by 8% to $93.4 million, compared to $86.4 million in 2016. This increase in service sales is mainly attributed to renewals of existing support contracts and sales of new support contracts.

During 2017, our revenues from the enterprise market represented approximately 66%, whereas revenues from the carrier market represented approximately 34% of our revenues, compared to 69% and 31%, respectively, in 2016.

Our revenues in the Americas increased in 2017 by $13.0 million compared to 2016, or 16% year-over-year, mainly due to greater demand for cloud based security solutions. Revenues from the EMEA region increased by 5% compared to 2016. Revenues in Asia-Pacific region decreased by 2% due to change in our sales model which is reflected by the shift to subscription sales which resulted lower revenue recognition.

Cost of Revenues.

Cost of revenues refers to both products and service revenues and consists primarily of the cost of circuit boards and other components required for the assembly of our products, salaries and related personnel expenses for those engaged in the final assembly and in providing support and maintenance service of our products, license fees paid to third parties, fees paid to managed security service provider (related parties), inventory write-offs, amortization of acquired technology and other overhead costs.

The following table sets forth a breakdown of our cost of revenues between products and services for the periods indicated, in absolute figures (dollars in thousands) and as a percentage of the relative product and services revenues:

	2018		2017		2016	
Cost of Products	30,803	26.1%	30,862	26.2%	27,320	24.8%
Cost of Services	10,872	9.3 %	8,754	9.4 %	8,375	9.7 %
Total	41,675	17.8%	39,616	18.7%	35,695	18.2%

Cost of products sales as a percentage of products sales was 26.1%, approximately the same as 2017. Cost of products sales in 2018 and 2017 included amortization of intangible assets in the amount of $0.9 and $1.1 million, respectively. Our cost of products sales as a percentage of products sales, excluding amortization of intangible assets, represented approximately 25.4% of products sales in 2018, compared to 25.2% in 2017.

Cost of sales related to services as a percentage of service revenues in 2018 was 9.3% compared to 9.4% in 2017.

Cost of products sales as a percentage of products sales increased from 24.8% in 2016 to 26.2% in 2017. Cost of products sales in 2017 and 2016 included amortization of intangible assets in the amount of $1.1 and $1.0 million, respectively. Our cost of products sales as a percentage of products sales, excluding amortization of intangible assets, represented approximately 25.2% of products sales in 2017, compared to 23.9% in 2016. The increase in cost of products sales as a percentage of products sales is mainly due to different sales mix of our products, cost of operating our cloud infrastructure and expanding our global logistic footprint to support our global maintenance and support commitments.

Cost of sales related to services as a percentage of service revenues in 2017 was 9.4% compared to 9.7% in 2016.

Operating Expenses.

The following table sets forth a breakdown of our operating expenses (dollars in thousands) for the periods indicated as well as the percentage change between such periods:

	2018	2017	2016	% Change 2018 vs. 2017	% Change 2017 vs. 2016
Research and development, net	$57,674	$59,003	$51,732	(2)%	14%
Selling and marketing	111,386	108,744	103,774	2%	5%
General and administrative	16,145	17,577	18,133	(8)%	(3)%
Other income	-	(6,900)	-		
Total	$185,205	$178,424	$173,639	4%	3%

Our operating expenses increased by 4% in 2018 to $185.2 million from $178.4 million in 2017. The increase is primarily attributed to (1) $6.9 million of other income related to an intellectual property dispute against F5 that resulted in a cash award determined in 2017 which we received in 2018; (2) an increase of $2.0 million is attributed to marketing related expenses and (3) an increase of $0.9 million related to the impact of the weakening of the dollar, mainly against the EURO. Such increase was partially offset by a decrease in our general and administrative expenses in an amount of $1.2 million related mainly to litigation costs of the intellectual property matter, namely the patent litigation against F5.

The increase in our operating expenses is also due to an increase in other expenses as more fully described below.

Research and Development Expenses.

Research and development, or R&D, expenses consist primarily of salaries and related personnel expenses, costs of subcontractors and prototype expenses related to the design, development, quality assurance and enhancement of our products, and depreciation of equipment purchased for the development and testing processes. All R&D costs are expensed as incurred. We believe that continued investment in R&D is critical to attaining our strategic product objectives.

R&D expenses were $57.7 million in 2018, a decrease of $1.3 million, or 2% compared with R&D expenses of $59.0 million in 2017. This decrease is primarily a result of the following: (1) a decrease of $0.5 million due to a combination of a lower average number of R&D employees and subcontractors in 2018 and an increase related to salary raises awarded in the beginning of the year; (2) a decrease of $0.7 million is attributed to lower stock-based compensation expenses (see also “Stock based compensation expenses” below); and (3) higher grants received from the IIA during 2018. In 2018 we received $0.7 million in IIA grants compared to $0.5 million in 2017.

R&D expenses were $59.0 million in 2017, an increase of $7.3 million, or 14% compared with R&D expenses of $51.7 million in 2016. This increase is primarily a result of the following: (1) an increase of $2.9 million attributed to the acquisition of Seculert in January 2017; (2) an increase of $2.6 million related to the impact of the weakening of the dollar, mainly against the NIS; (3) an increase of $2.1 million due to salary raises awarded in mid-2017 and other salaries related expenses; (4) an increase of $ 0.5 million attributed to higher stock-based compensation expenses (see also “Stock based compensation expenses” below) and (5) an increase of $0.3 million attributed to lower grants received from the IIA. Such increase was partially offset due to: (1) the cease of the Radyoos activity during 2017 in an amount of $ 0.7 million and (2) $0.4 million related to the adjustment of the fair value of the Seculert acquisition contingent consideration.

Sales and Marketing Expenses.

Sales and marketing expenses consist primarily of salaries, commissions and related personnel expenses for those engaged in the sales and marketing of our products, operational costs of our offices which are located outside Israel and are engaged in the promotion, marketing and support of our products, in addition to the related trade shows, advertising, promotions, web site maintenance and public relations expenses, and amortization of intangible assets.

Sales and marketing expenses were $111.4 million in 2018, an increase of $2.7 million, or 2%, compared with sales and marketing expenses of $108.7 million in 2017. This increase is primarily a result of the following: (1) an increase of $2.0 million is attributed to marketing related expenses; (2) an increase of $2.8 million is related to commissions expenses due to the growth in sales during 2018 and an increase related to salary raises awarded in the beginning of 2018 and salary-related expenses; and (3) an increase of $0.7 million related to the impact of the weakening of the dollar, mainly against the EURO. Such increase was partially offset mainly by a decrease of $2.5 million related to the capitalization of contract costs following the adoption of ASC 606 in 2018.

Sales and marketing expenses were $108.7 million in 2017, an increase of $4.9 million, or 5%, compared with sales and marketing expenses of $103.8 million in 2016. This increase is primarily a result of the following: (1) an increase of $2.7 million primarily due to increases in personnel costs and commissions due to the growth in sales during 2017, (2) an increase of $1.0 million related to the impact of the weakening of the dollar, mainly against the NIS and the EUR (3) an amount of $0.2 million that is related to the acquisition of Seculert in 2017, (4) an increase of $1.2 million is attributed to higher stock-based compensation expenses (see also "Stock based compensation expenses" below), and (5) an increase of $0.5 million is related to increased travel expenses. Such increase was partially offset due to the cease of the Radyoos activity during 2017 in an amount of $0.8 million.

General and Administrative Expenses.

General and administrative expenses consist primarily of salaries and related personnel expenses for executive, accounting and administrative personnel, professional fees (which include legal, audit and additional consulting fees), bad debt expenses, acquisition related costs and other general corporate expenses.

General and administrative expenses were $16.1 million in 2018, a decrease of $1.5 million, or 8% compared with general and administrative expenses of $17.6 million in 2017. The decrease in general and administrative expenses in 2018 was primarily due to (1) a decrease in litigation costs related mainly to intellectual property litigation matters by an amount of $1.2 million; and (2) a decrease of $0.6 million related to services fees due to consultants and other professionals, changes in the fair value of our contingent consideration and depreciation expenses. This decrease was offset by an increase of $0.6 million related to personnel costs and related expenses. For a discussion of the impact of foreign currency fluctuations our business, see "Item 11. Quantitative and Qualitative Disclosures about Market Risk".

General and administrative expenses were $17.6 million in 2017, a decrease of $0.5 million, or 3%, compared with general and administrative expenses of $18.1 million in 2016. The decrease in general and administrative expenses in 2017 was primarily due to (1) a decrease in litigation costs related mainly to the intellectual property litigation matter by an amount of $2.2 million and (2) a decrease of $0.3 million related to stock-based compensation expenses. This decrease was offset by (1) an increase of $1.0 million related to increase in personnel costs; (2) an increase of $0.3 million related to depreciation expenses and (3) an increase of $0.7 million related to the weakening of the dollar against the NIS.

Stock-based compensation expenses.

Our expenses also include recognition of stock-based compensation, which is allocated among cost of sales, research and development expenses, marketing and selling expenses and general and administrative expenses, based on the division in which the recipient of the option grant is employed. The stock-based compensation is amortized to operating expenses over the requisite service period of the individual options.

Stock-based compensation expenses in 2018 totaled to $ 12.5 million, a decrease of $0.5 million, or 4%, compared with expenses of $13.0 million in 2017. During 2018, we granted stock options to purchase approximately 1.1 million shares at a weighted average grant-date fair value of $6.7 per option and 0.4 million restricted stock units, or RSUs, at a weighted average grant-date fair value of $23.8 per RSU, compared to 1.7 million options granted during 2017 at an average grant-date fair value of $4.3 per option and 0.4 million RSUs at a weighted average grant-date fair value of $16.2 per RSU. The reason for the decrease in our stock-based compensation expenses in 2018 is mainly due to the decrease in the quantity of options granted in 2018 compared to 2017, despite the increase in our weighted average grant date fair value.

Stock-based compensation expenses in 2017 totaled $ 13.0 million, an increase of $1.5 million, or 13%, compared with expenses of $11.5 million in 2016. During 2017, we granted stock options to purchase approximately 1.7 million shares at a weighted average grant-date fair value of $4.3 per option and 0.4 million RSUs, at a weighted average grant-date fair value of $16.2 per RSU, compared to 2.8 million options granted during 2016 at an average grant-date fair value of $3.5 per option and 0.7 million RSUs at a weighted average grant-date fair value of $12.8 per RSU. Since these values are recognized as an expense based on the accelerated attribution method over the requisite service period of each award, a large portion of these values is being recognized as an expense in the first year since grant date of each award, which resulted in higher stock-based compensation expenses in 2017 compared to 2016, despite the decrease in number of options granted in 2017 compared to the number of options granted in 2016. In addition, the higher average grant-date fair value of the options and RSUs granted in 2017 compared with such equity grants in 2016 also impacted this expense item in 2017.

Other Income

During 2017 we recorded $6.9 million of other income related to the award we collected in connection with an intellectual property dispute for which we recorded litigation costs in an amount of $0.8 million, $2.1 million and $4.3 million during 2018, 2017 and 2016, respectively.

Financial Income Net.

Financial income, net consists primarily of interest earned on short-term and long-term bank deposits, amortization of premiums, accretion of discounts, interest and dividends earned on investments in marketable securities, gain from sale of marketable securities and from income and expenses from the translation of monetary balance sheet items denominated in non-dollar currencies.

Financial income, net was $7.3 million in 2018, compared with $4.8 million in 2017. The net increase of $2.5 million is primarily attributed to an increase of $2.0 million in interest income from investments in marketable securities and short- and long-term bank deposits and from a decrease of $ 0.4 million in foreign currency exchange losses.

Financial income, net was $4.8 million in 2017, compared with $5.7 million in 2016. The net decrease of $0.9 million is attributed to a decrease in gain from sale of marketable securities in an amount of $1.8 million, offset by an increase of $0.8 million due to an increase in interest rates in 2017 leading to higher yields on our investment portfolio and the fact that our average investment portfolio balance in 2017 was higher by $14.0 million than our portfolio balance in 2016.

Income Taxes.

Israeli companies are generally subject to corporate tax on their taxable income at the rate of 23% and 24% for the 2018 and 2017 tax years, respectively. However, we have established Preferred Enterprise program, which entitles us for the tax benefits described below under the heading “Corporate Tax Rate.” These benefits result in part of our income being taxed at lower rates. The Preferred Enterprise tax rates in the years 2018 and 2017 were 9% in areas in Israel designated as Development Zone A and 16% elsewhere in Israel. The tax benefits depended on our meeting the requirements of the Approved, Beneficiary and Preferred Enterprise programs and there is no assurance that we will be able to obtain such benefits. Other subsidiaries of ours are taxed according to the laws in their countries of incorporation and tax expenses are recorded accordingly.

We operate our business in various countries and attempt to utilize an efficient operating model to optimize our tax payments based on the laws in the countries in which we operate. This can cause disputes between us and various tax authorities in different parts of the world.

Tax expense for 2018 amounted to $3.1 million compared to $5.7 million in 2017. The decrease of $2.6 million is primarily related to the reduction of the U.S. federal tax rate.

Tax expense for 2017 amounted to $5.7 million compared to $1.7 million in 2016. The increase of $4.0 million in the tax expenses is derived primarily from the change in the U.S. federal tax reform which led to re-measurement of our net deferred tax assets.

For additional disclosure and explanations regarding our income taxes, including Approved, Beneficiary and Preferred Enterprise programs, see note 12 to our consolidated financial statements included elsewhere in this annual report. and “Item 10E – Taxation – Israeli Tax Considerations.”

Impact of Currency Fluctuations and Inflation

Our financial results may be negatively impacted by foreign currency fluctuations and inflation. Information required by this section is set forth in “Item 11 – Quantitative and Qualitative Disclosures about Market Risk” and in “Item – 3D – “Risk Factors” –Currency exchange rates and fluctuations of exchange rates could have a material adverse effect on our results of operations”, each of which are incorporated herein by reference.

Impact of Governmental Policies

For information on the impact of governmental policies on our operations, see “Item 4B – “Government Regulations” and “Item – 3D – “Risk Factors” – “Government regulation affecting our business is evolving, and unfavorable changes could harm our business” and “Risks Related to Operations in Israel.”

Related Parties

We have entered into a number of agreements with certain companies, of which Yehuda Zisapel, Zohar Zisapel and/or Nava Zisapel are co-founders, directors and/or principal shareholders, collectively known as the RAD-Bynet Group and, in one of which, SecurityDam, Roy Zisapel, our President and Chief Executive Officer and a director, also holds a minority stake. In addition, we purchase different services and fixed assets from third parties at special rates offered to the RAD-Bynet Group, such as car leases, maintenance, insurance and communication. In addition we also purchase Managed Security Service Providers (MSSP) scrubbing centers services from SecurityDam.

We believe that the terms of the transactions in which we have entered with members of the RAD-Bynet Group are not different in any material respect from terms we could obtain from unaffiliated third parties and are beneficial to us and no less favorable to us than terms, which might be available to us from unaffiliated third parties. The pricing of the transactions was arrived at based on negotiations between the parties. Members of our management reviewed the pricing of the agreements and confirmed that they were not different in any material respect than that which could have been obtained from unaffiliated third parties.

See also below under “Item 7B – Major Shareholders and Related Party Transactions - Related Party Transactions”.

B. Liquidity and Capital Resources

General

Since our inception, we have financed our operations through a combination of issuing equity securities, including two public offerings in October 1999 and February 2000, research and development and/or marketing grants from the Government of Israel and cash generated by operations.

The Company’s equity as a percentage of its total assets was 68% at December 31, 2018, compared with 67% at December 31, 2017 and 70% at December 31, 2016.

Cash and cash equivalents, short-term and long-term bank deposits and short- and long-term marketable securities were $401.1 million at December 31, 2018, compared with $344.3 million and $320.1 million at December 31, 2017 and at December 31, 2016 respectively.

Principal Capital Expenditures and Divestitures

Capital expenditures were $8.9 million, $7.2 million and $9.4 million for the years ended December 31, 2018, 2017 and 2016, respectively. These expenditures were mainly comprised of investments in cloud infrastructure, ERP modules, leasehold improvements, machinery and equipment, computers, lab equipment and testing tools.

We expect to engage in additional capital spending to support possible growth in our operations, infrastructure and personnel. In 2019, we anticipate that the majority of our capital expenditures will be primarily for R&D testing, lab equipment, additional investments in new modules to our ERP system and additional infrastructure to support our cloud-based solutions.

We did not affect any principal divestitures in the past three years.

Working Capital and Cash Flows

The following table presents the major components of net cash flows used in and provided by operating, investing and financing activities for the periods presented (dollars in thousands):

	2018	2017	2016
Net cash provided by operating activities	$49,251	$31,464	$38,480
Net cash provided by (used in) investing activities	(85,503)	(56,342)	28,359
Net cash provided by (used in) financing activities	16,218	10,478	(20,944)

Net cash provided by operating activities for 2018, 2017 and 2016 was $49.3 million, $31.5 million and $38.5 million, respectively. Our net income (loss) in 2018, 2017 and 2016 was $11.7 million, ($7.5) million and ($8.7), respectively.

Net cash provided by operating activities in 2018 consisted of net income adjusted for non-cash activity, including stock-based compensation expenses, depreciation, amortization of intangible asset and amortization of premiums, accretion of discounts and accrued interest on available-for-sale marketable securities, an increase in deferred revenues, accrued interest on bank deposits, increase in trade receivables offset by a decrease in other payables and accrued expenses and other long-term liabilities, other current assets and prepaid expenses, decrease in inventories and a decrease in trade payables.

Net cash provided by operating activities in 2017 consisted of net loss adjusted for non-cash activity, including stock-based compensation expenses, depreciation, amortization of intangible asset and amortization of premiums, accretion of discounts and accrued interest on available-for-sale marketable securities, an increase in deferred revenues, accrued interest on bank deposits, decrease in trade receivables partially offset by an increase in other payables and accrued expenses and other long-term liabilities, other current assets and prepaid expenses, increase in inventories and a decrease in trade payables.

Net cash provided by operating activities in 2016 consisted of net loss adjusted for non-cash activity, including stock-based compensation expenses, depreciation, amortization of intangible asset and amortization of premiums, accretion of discounts and accrued interest on available-for-sale marketable securities, plus an increase in other payables and accrued expenses and other long-term liabilities, an increase in deferred revenues, accrued interest on bank deposits, decrease in trade receivables partially offset by gain from sales of available for sale marketable securities, other current assets and prepaid expenses, increase in inventories and a decrease in trade payables.

Net cash used in investing activities amounted to $85.5 million for 2018 compared to net cash used in investing activities of approximately $56.3 million for 2017 and net cash provided by investing activities of approximately $28.4 million for 2016.

Net cash used by investing activity in 2018 consisted primarily of investment in bank deposits and marketable securities and purchase of property and equipment.

Net cash used by investing activity in 2017 consisted primarily of investment in bank deposits and marketable securities, payment for the Seculert acquisition and purchase of property and equipment.

Net cash provided by investing activity in 2016 consisted of proceeds from bank deposits and marketable securities partially offset by the purchase of property and equipment.

Net cash provided by financing activities in 2018 was $16.2 million compared to net cash provided by financing activities of $10.5 million in 2017 and net cash used in financing activities of $20.9 million in 2016.

Net cash provided by financing activities in 2018 was attributed to proceeds from issuance of shares upon exercise of stock options by our employees offset by repurchase of our ordinary shares as well as the repayment of the contingent consideration as part of the Seculert acquisition.

Net cash provided by financing activities in 2017 was attributed to proceeds from issuance of shares upon exercise of stock options by our employees partially offset by repurchase of our ordinary shares.

Net cash used in financing activities in 2016 was attributed primarily to the repurchase of our ordinary shares, and from adjustment of tax deficiency related to exercise of stock options, offset by proceeds from issuance of shares upon exercise of stock options by our employees.

Cash and Cash Equivalents

As of December 31, 2018, we had cash and cash equivalents, including short-term and long-term bank deposits and short-term and long-term marketable securities, of $401.1 million, compared to $344.3 million as of December 31, 2017 and $320.1 million as of December 31, 2016. As of December 31, 2018, approximately 70% of our short-term and long-term bank deposits were deposited in major Israeli banks in Israel which are rated AAA, as determined by S&P's Maalot, and 30% were deposited in the U.S. branch of another major Israeli bank which is rated AAA, as determined by S&P's Maalot. As of December 31, 2018, the longest contractual duration of any of our bank deposits was 2.25 years, the weighted average duration of our deposits was 1.30 years, and the weighted average time to maturity was 0.48 year.

Our marketable securities portfolio includes investments in foreign banks and government debentures and in debt of corporations. The financial institutions that hold our marketable securities are major U.S. financial institutions, located in the United States. As of December 31, 2018, 47% of our marketable securities portfolio was invested in debt securities of financial institutions, 5% in debt securities of governmental institutions and 48% in debt securities of corporations. From a geographic perspective, 38% of our marketable securities portfolio was invested in debt securities of U.S. issuers, 29% were invested in debt securities of European issuers and 33% was invested in debt securities of other geographic-located issuers. As of December 31, 2018, 91% of our marketable securities portfolio were rated A- or higher, 7% were rated BBB or BBB+, and 2% was rated BB-, as determined by S&P.

There are no material legal restrictions, taxes or other costs associated with transferring our funds held in U.S. financial institutions to Israeli financial institutions, and we have access to all of our cash as needed for our operations. Although we have various subsidiaries throughout the world, there are no material legal, tax or other cost impediments to our transferring cash to these subsidiaries for operations as and when needed or to such subsidiaries transferring cash to Radware to meet its own cash obligations. Further, Radware generates sufficient cash from its Israeli operations to fund its operating and capital requirements and, therefore, does not need or intend to repatriate any of the earnings of its foreign subsidiaries.

Days-Sales-Outstanding

The days-sales-outstanding (DSO) for a given period is calculated by dividing the end-of-period balance of accounts receivable by the average daily sales in the period.

Our average quarterly DSO (computed over the four quarters of the year) was 27 days in 2018, compared with 29 days in 2017 and 44 days in 2016. When computed annually, the DSO is 27 days in 2018, down from 28 days in 2017 and 36 days in 2016.

In 2018, we maintained substantially the same DSO levels as in 2017. DSO decreased in 2017 mainly as a result of a more even distribution of our invoicing throughout all financial calendar quarters in 2017 than they were in 2016. Due to the fact that most of these invoices are not collected within the month of issuance, but only in the following months, our DSO decreased in 2017 compared to 2016. In addition, our 2017 DSO ratio was also affected by the transition in our business model, where we collected payments ahead of revenue recognition.

Outlook

Our capital requirements depend on numerous factors, including market acceptance of our products and the resources we allocate to our operating expenses. Since our inception, we have experienced substantial increases in our expenditures consistent with growth in our operations and personnel, and we may increase our expenditures in the foreseeable future in order to execute our strategy.

We anticipate that operating activities as well as capital expenditures will demand the use of our cash resources. We believe that our cash balances will provide sufficient cash resources to finance our operations and the projected marketing and sales activities and research and development efforts and other elements of our strategy for a period of no less than the next twelve months.

Market Risk

We are exposed to market risk, including fluctuations in interest rates and foreign currency exchange rates. Additional information about market risk is set forth in “Item 11 – Quantitative and Qualitative Disclosures about Market Risk” and incorporated herein by reference.

C. Research and Development, Patents and Licenses, etc.

In order to accommodate the rapidly changing needs of our markets, we place considerable emphasis on research and development projects designed to improve our existing product lines, develop new product lines and customize our products to meet our customers’ needs. As of December 31, 2018, we had 316 employees and 56 subcontractors engaged primarily in research and development activities, compared to 320 employees and 61 subcontractors at the end of 2017. For a further discussion of research and development, see “Item 5A – Operating and Financial Review and Prospects – Operating Results.”

For a discussion regarding the benefits provided under programs of the IIA, see “Item 4B – Information about the Company – Business Overview – Israeli Innovation Authority.”

D. Trend Information

We have identified the following key trends that we believe will continue to influence our markets and the demand for our solutions:

- Applications are migrating to the cloud. Organizations therefore require broader protection that encompasses both the enterprise and cloud-based applications. They also prefer to purchase security services as a subscription, to match the subscription-based consumption of hosting services.

- Datacenter architecture is changing, to include various models such as a physical datacenter, a virtual datacenter, a software defined datacenter, and private or public cloud. Many organizations use a mixed infrastructure that includes a combination of one or more of the above. This mixed environment often involves multiple vendors and creates challenges in IT staffing and operational costs, which increase the needs for hybrid cloud services, managed services and modern automated data center technologies.

- Application infrastructure is changing, from monolithic applications based on the 3-tier applications, client server and so on, to a cloud-native or micro-services architecture that are packaged as containers, providing a built-in ‘on-demand’ elasticity and availability application infrastructure. This shift in application lifecycle control and delivery methods is triggered by the need to match the ‘cloud clock’ for the ever-changing business needs, rely on a new application networking infrastructure, the service-mesh network. This enables to introduce and run the new generation of cloud-native applications, in a fast, adaptive and more efficient way by adapting DevOps tools and methods.

- Increasing complexity and intensity of security threats require expertise in identifying the attacks and recommending the right action. Attack delivery is aided by the growing presence of connected devices (IoT) which increases the threat surface against any kind of infrastructure, as well as traffic encryption (dark data) assisting hiding attacks, and attack tools are becoming more sophisticated as hackers use automation and weaponizing Artificial Intelligence. All of that leads to ever-morphing and scalable attack vectors. In addition, attack tools are increasingly available to all through the Dark net. The mass amount of uncontrolled IoT devices and the cloud hosting opens up the doors for new generation of botnets and bots, hard to classify and block. Moreover, the usage of public cloud infrastructure by most of the enterprises, creates the need to protect the cloud workloads and services from different attack surfaces, manifested by the fact that the cloud application's DevOps processes are done from the outside the cloud 'perimeter' unlike the premise-based application development process (The insider becomes the outsider). Most organizations are not able to keep up with these developments with their internal cyber security resources and seek managed security services.

- Increasing expectations for applications availability and performance, due to the increasing dependence on applications in today's business world. Businesses are sensitive to the resilience and availability of their applications and given their customers' expectations of a world class experience can identify a direct commercial impact from a less than optimal performance.

We believe that our business, comprised of application security and delivery products and services, is positioned to benefit from the above-mentioned industry dynamics due to the following key factors:

- We have developed a broad portfolio of solutions to address the challenges arising from these trends.

- We continuously focus on innovation and believe that our products and services have, in many instances a technological advantage over competing solutions.

- We offer our solutions in a wide array of deployment models (on-premises devices and solution, managed services, cloud-based solutions, etc.), in order to support various customers' business models. We believe this flexibility addresses the complexity and diversity of the current application and infrastructure ecosystem.

We believe that the advantages of our offerings, coupled with the above-mentioned industry dynamics and trends, place us in a good position to meet our business plans. Nevertheless, meeting our business plans may not convert into revenues growth, due to our shift towards an increased proportion of subscription-based product sales, which are recognized throughout the subscription period.

As more fully described under Item 4.B. "Business Overview – Our Growth Strategy" above, our growth strategy is based on several key elements: Adapting our application delivery and security solutions to the ever-changing business landscape, thus providing holistic solutions across hybrid delivery environments by adding new layers to our solution stacks continuing to innovate industry leading solutions to maintain our technology advantages and differentiation; expand and leverage our market footprint, through internal resources as well as relationships with resellers, service providers, and other partners and pursue acquisitions.

In addition, we operate in a highly competitive environment, and some of our competitors have larger internal resources, and a larger installed base. Moreover, while we believe that the shift towards a subscription-based business model is a strategic transition towards higher growth and profitability in the long term, we may not be successful in its execution and specifically, in maintaining a high subscription renewal rate. In addition, our customers purchasing decisions are related to the conditions in our industry and in the various regions and geographical markets in which we operate and are tied to the overall IT spending climate. Uncertainty about current global economic conditions continues to pose a risk as customers may postpone or reduce spending in response to such uncertainties. For other risks and uncertainties we face, see under Item 3.D. "Risk Factors".

E. Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements, as such term is defined under Item 5E of the instructions to Form 20-F, that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

F. Tabular Disclosure of Contractual Obligations

The following table summarizes our contractual obligations as of December 31, 2018 and the effect those commitments are expected to have on our liquidity and cash flow.

	Payments Due By Period (US $ in thousands)				
Contractual obligations	Total	Less than 1 year*	1-3 years	3-5 years	More than 5 years
Operating leases (1)	10,168	4,661	3,986	850	671
Total contractual cash obligations (2)(3)	10,168	4,661	3,986	850	671

* Become due during 2019.

(1) Consists of outstanding operating leases for the Company's facilities. The lease agreements expire in the years 2019 to 2027, although certain of our leases have renewal options. The data in this row details our future minimum payments under non-cancelable operating lease agreements at December 31, 2018.

(2) Payments for uncertain income tax positions of $3.2 million under ASC No. 740 are due upon settlement. Since we are unable to reasonably estimate the timing of settlement, such payments are not included in the table. See also Notes 2(s) and 12(a) of our consolidated financial statements.

(3) Severance payments of $2.2 million are payable only upon termination, retirement or death of the respective employee and there is no obligation for benefits accrued prior to 2007 if the employee voluntarily resigns. Since we are unable to reasonably estimate the timing of settlement, such payments are not included in the table. See also Note 2(u) of our consolidated financial statements.

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors and Senior Management

The following table lists our current directors and senior management:

Name	Age	Position
Yehuda Zisapel (1)	77	Chairman of the Board of Directors
Yair Tauman (2)(3)(4)(5)	70	Director, Chairman of the Compensation Committee
David Rubner (1)(3)(4)(5)	79	Director, Chairman of the Audit Committee
Yael Langer (6)	54	Director
Avraham Asheri (1) (4) (5)	81	Director
Joel Maryles (2)(4)(5)	59	Director
Roy Zisapel (2)	48	President, Chief Executive Officer and Director
Doron Abramovitch	50	Chief Financial Officer
David Aviv	63	Chief Technology Officer
Gabi Malka	43	Chief Operating Officer
Sharon Trachtman	52	Chief Business Operation Officer
Anna Convery-Pelletier	50	Chief Marketing Officer
Yoav Gazelle	49	VP Sales EMEA & CALA
Terence Ying	57	VP Sales Asia-Pacific
Amir Peles	47	VP Technologies

(1) Term as director expires at the annual meeting of shareholders to be held in 2021.
(2) Term as director expires at the annual meeting of shareholders to be held in 2019.
(3) External Director, as defined in the Israeli Companies Law.
(4) Qualified as an independent director, as determined under the Nasdaq rules.
(5) Serves on the Audit and Compensation Committees of the Board of Directors.
(6) Term as director expires at the annual meeting of shareholders to be held in 2020.

Yehuda Zisapel, co-founder of our Company, has served as a member of our Board of Directors since our inception in May 1996 and served as Chairman of our Board of Directors from May 1996 until August 2006 and again since November 2009. In addition, Mr. Zisapel serves as a director of Radware Inc. and other subsidiaries. Mr. Zisapel is also a founder and a director of RAD Data Communications Ltd., a worldwide data communications company headquartered in Israel, and BYNET Data Communications Ltd., a distributor of data communications products in Israel and serves as a director of other companies in the RAD-Bynet Group. See "Item 4C – Organizational Structure." Mr. Zisapel has a B.Sc. and a M.Sc. degree in electrical engineering as well as an Award of Honorary Doctorate (DHC-Doctor Honoris Causa) from the Technion, Israel Institute of Technology and an M.B.A. degree from Tel Aviv University, Israel. Yehuda Zisapel is the father of Roy Zisapel, our President, Chief Executive Officer and director.

Prof. Yair Tauman has served as a member of our Board of Directors since October 2010. He is the Dean of the Adelson School of Entrepreneurship in the Interdisciplinary Center (IDC) in Herzliya, Israel and was previously the Dean of the Arison School of Business in the IDC. He is also a Leading Professor of Economics and the Director of the Center for Game Theory in Economics at Stony Brook University, New York. He was a professor in Tel-Aviv University for 25 years until 2009 and, prior thereto, served as a professor in Kellogg School of management at Northwestern University. His areas of research include game theory and industrial organization. Prof. Tauman currently serves on the board of directors of other public and private companies from different sectors, including online auctions, education and IT. Prof. Tauman obtained his Ph.D. and M.Sc. degrees in mathematics as well as a B.Sc. in mathematics and statistics from The Hebrew University, Israel.

David Rubner has served as a member of our Board of Directors since October 2009. Mr. Rubner is the Chairman and Chief Executive Officer of Rubner Technology Ventures Ltd., and Chairman of the Board of Novelsat, Ltd. During the years 1991 to 2000, he was President and Chief Executive Officer of ECI Telecom Ltd. ("ECI"). Prior to that, Mr. Rubner held several senior positions within ECI, such as Chief Engineer, Vice President of Operations and Executive Vice President, General Manager of the Telecommunications division. Prior to joining ECI, Mr. Rubner was a senior engineer in the Westinghouse Research Laboratories in Pittsburgh, Pennsylvania. Mr. Rubner serves on the boards of Eltek Ltd. and other private companies. He also serves on the boards of trustees of Shaare Zedek Hospital and Jerusalem College of Technology. Mr. Rubner holds a B.Sc. degree in engineering from Queen Mary College, University of London, England and an M.S. degree from Carnegie Mellon University.

Yael Langer has served as a member of our Board of Directors since July 2009. Ms. Langer has served as the general counsel and secretary of RAD Data Communications Ltd. and several other companies in the RAD-BYNET group since July 1998 Since December 2000, Ms. Langer has served as a director in Ceragon Networks Ltd., a company publicly-traded on Nasdaq and the Tel-Aviv stock markets. From 1995 to 1998, Ms. Langer served as assistant general counsel to companies in the RAD-BYNET group. From 1993 until 1995, Ms. Langer was a member of the legal department of Poalim Capital Markets and Investments Ltd., the underwriting and investment banking subsidiary of Bank Hapoalim. Ms. Langer holds an L.L.B. degree from The Hebrew University, Israel.

Avraham Asheri has served as a member of our Board of Directors since July 2009. Mr. Asheri was the President and Chief Executive Officer of Israel Discount Bank ("DB") during the years 1991 to 1998. Prior to that, from 1983 until 1991 he served as Executive Vice President of DB and a member of its Management Committee. Before that, Mr. Asheri served at the Israel Ministry of Industry and Trade and at the Israel Ministry of Finance, including in the positions of Director General of the Ministry of Industry and Trade, Managing Director of Israel Investment Center, and Trade Commissioner of Israel to the United States. Mr. Asheri acts as chairman of the Budget and Finance Committee of the Board of Governors of the Hebrew University, member of the Executive Committee of the Jerusalem Institute for Policy Research and serves as a member of the board of directors of Mishkenot Sha'ananim and as the Chairman of its Finance Committee. Mr. Asheri holds a BA degree in economics and political science from The Hebrew University, Israel.

Joel Maryles, has served as a member of our Board of Directors since January 2014. Mr. Maryles was a Partner at OurCrowd from 2015 to 2018. He held numerous senior positions in the financial sector over the past three decades. From 2007 to 2012, Mr. Maryles was a portfolio manager of T-Cubed Investments LP, an equity hedge fund that he founded. From 1996 to 2006, he was a Managing Director at Citigroup Investment Banking where, in addition to his role as a senior technology banker, he founded and managed the Israeli investment banking operations for Citigroup/Salomon Smith Barney. From 1986 to 1996, Mr. Maryles held various senior positions at Furman Selz, a U.S.-based investment bank, including Managing Director focused on Israeli technology and healthcare transactions. Prior to Furman Selz, Mr. Maryles was an Investment Officer at First Chicago Investment Advisors. Mr. Maryles holds a B.Sc. degree in engineering from the University of Illinois and an M.B.A. from the University of Chicago.

Roy Zisapel, co-founder of our Company, has served as our President and Chief Executive Officer and a director since our inception in May 1996. Mr. Zisapel also serves as a director of Radware Inc. and other subsidiaries. From 1996 to 1997, Mr. Zisapel was a team leader of research and development projects for RND Networks Ltd. From 1994 to 1996, Mr. Zisapel was employed as a software engineer for unaffiliated companies in Israel. Mr. Zisapel has a B.Sc. degree in mathematics and computer science from Tel Aviv University, Israel. Roy Zisapel is the son of Yehuda Zisapel, who is the Chairman of the Board of Directors of the Company.

Doron Abramovitch has served as our Chief Financial Officer since September 2015. In such role, Mr. Abramovitch oversees Radware's business performance and strategic growth initiatives. He is responsible for overall financial management of the company, its financial reporting and disclosure practices, and overall corporate operational and infrastructure functions. Prior to Radware, Mr. Abramovitch was Corporate Vice President and Chief Financial Officer of Orbotech Ltd. from May 2011 to June 2015. Prior to joining Orbotech, from 2005 to 2011, Mr. Abramovitch served as senior executive vice president and chief operating officer of Bagir Group Ltd., an Israeli TASE-listed company. Prior to joining Bagir, Mr. Abramovitch served, from 2000 to 2005, as chief financial officer and, from 2004 to 2005, as chief executive officer and chief financial officer, of Phytech Technologies (2000) Ltd., then an Israeli TASE-listed company. Mr. Abramovitch is a certified public accountant and received a B.Sc. and M.B.A. degrees in business administration from Tel Aviv University.

David Aviv has served as our Chief Technology Officer since 2016 and as our Vice President, Advanced Services, since 2004. Prior to joining Radware, he was the VP Engineering of Ofek, an Israel based ILEC and a senior consultant. Prior to that, until 2000, Mr. Aviv served in the Israeli Air Force as a senior technical leader. He also serves as the Technical Chairman of the Israeli Telecom Standards Body committee. Mr. Aviv holds a Ph.D. degree in Electrical Engineering (EE) from the Naval Postgraduate School in Monterey, California, a B.S. degree in Electrical Engineering from Ben-Gurion University and an M.S. degree in Electrical Engineering from Tel Aviv University, Israel.

Gabi Malka has served as our Chief Operating Officer since March 2014. From May 2005 to February 2014, Mr. Malka served as Vice President of Research and Development at HP Software (formerly Mercury). Prior to HP, from 2000 to 2005, Mr. Malka headed the R&D of AppStream (acquired by Symantec). Prior to AppStream, from 1998 to 2000, Mr. Malka directed R&D organization at Amdocs Limited. Mr. Malka holds a B.A. from American InterContinental University and has furthered his post-graduate education at Lahav Business School, Tel Aviv University and Harvard Business School.

Sharon Trachtman has served as our Chief Business Operation Officer since December 2016. Prior to that she was our Chief Marketing Officer and before that Ms. Trachtman served as our Global Marketing Vice President since 2008. Prior to that, since 1997 she held various senior positions in Radware, such as Product Management Vice President and Marketing Vice President. From 1994 to 1997, Ms. Trachtman was a product line marketing manager for Scitex Corporation. Ms. Trachtman holds a B.A. degree in computer science and philosophy from Bar-Ilan University, Israel.

Yoav Gazelle has served as our Vice President, EMEA & CALA since June, 2013. Prior to joining Radware, between 2000 and 2013, Mr. Gazelle held a variety of sales, marketing and business development positions in ECI Telecom Ltd., including President, Head of Europe and the Americas from January 2012 to March 2013. Mr. Gazelle holds a B.Sc. degree in electrical and electronic engineering from the Technion – The Israeli Institute of Technology, Israel.

Terence Ying has served as our Vice President, APAC since April 2002. Prior to joining Radware, between 1998 to 2002, Mr. Ying held a series of senior positions with Nortel Networks' APAC division, including as Marketing Director for the Intelligent Internet Business Unit, Managing Director of Greater China for Alteon WebSystems (acquired by Nortel in 2000) and the Enterprise Director for Nortel in Hong Kong. Mr. Ying holds a M.S. degree in IT management from the Macquarie University of Australia.

Anna Convery-Pelletier has served as our Chief Marketing Officer since December 2016. As a member of the executive leadership team, she leads the global marketing organization, which consists of the corporate, product, field and channel marketing teams. Ms. Convery is responsible for the marketing strategy that shapes the future of the Radware brand while directly increasing the marketing contribution to drive revenue and increase market share Prior to joining Radware, Ms. Convery held the position of Chief Marketing Officer and Executive Vice President of Strategy for OpenSpan Inc. (now Pega Systems Inc.) for five years. Ms. Convery has more than 25 years' experience in enterprise technology, helping FORTUNE 500 companies drive operational and financial excellence, leveraging technology innovation to deliver digital transformation and world-class customer experience. At OpenSpan, Ms. Convery's responsibilities included global go-to-market strategy and strategic enterprise growth for the company. Prior to OpenSpan, Ms. Convery held senior executive roles at NICE Systems Ltd., ClickFox, Inc., and Nexidia Inc., as well as global marketing and business development roles at IBM Corporation, Jacada Ltd. and Unibol Inc. Named a "Woman of the Year in Technology" by Women in Technology (WIT), Ms. Convery has received numerous industry awards and is a respected customer experience and enterprise transformation thought leader.

Amir Peles has served as our Vice President Technologies since July 2018 and has served in various positions within Radware since our inception in May 1996, including as our vice president of research and development and CTO. There he helped establish Radware's successful Application Delivery Controller (ADC) and Attack Mitigation (AMS) product/solution lines. Mr. Peles has more than 25 years of experience in network and application security, application delivery, data encryption and network infrastructure. Mr. Peles holds B.Sc. degrees in Computer Science, Statistics and Operations Research from the Tel Aviv University.

Additional Information

Under Nasdaq requirements, a majority of the members of our Board of Directors are required to be "independent" as defined under Nasdaq Marketplace Rules, or the Nasdaq rules. We currently satisfy this requirement because four of our seven directors (namely, Mr. David Rubner, Prof. Yair Tauman, Mr. Avraham Asheri and Mr. Joel Maryles) qualify as "independent directors" under the Nasdaq rules.

Yehuda Zisapel, the Chairman of the Board of Directors, co-founder of the Company, and a principal shareholder of our company, is the father of Roy Zisapel, our President, Chief Executive Officer and director. In accordance with the Companies Law, Mr. Zisapel's service as our Chairman was approved by our shareholders in September 2017. There are no other family relationships between any of the directors or members of senior management named above.

We are not aware of any arrangements or understandings with major shareholders, customers, suppliers or others, pursuant to which (1) any person referred to above was selected as a director or member of senior management or (2) any director will receive compensation by a third party in connection with his or her candidacy or board service in the Company.

B. Compensation

General

Our objective is to attract, motivate and retain highly skilled personnel who will assist Radware to reach its business objectives, performance and the creation of shareholder value and otherwise contribute to our long-term success. In October 2013, our shareholders approved the compensation policy for our executive officers and directors, or our Compensation Policy, in November 2015, our shareholders approved several modifications thereto and in September 2018 our shareholders ratified our Compensation Policy. Our Compensation Policy is designed to correlate executive compensation with Radware's objectives and goals.

The following table sets forth all compensation we paid or accrued with respect to all of our directors and officers as a group for the periods indicated. The table does not include any amounts we paid to reimburse any of our affiliates for costs incurred in providing us with services during such period.

	Salaries, fees, commissions and bonuses	Pension, retirement and other similar benefits
2017 - All directors and officers as a group, consisting of 14 persons*	$ 3,604,100	$ 504,900
2018 - All directors and officers as a group, consisting of 15 persons*	$ 4,050,500	$ 596,800

* All directors and executive officers as a group, consisting of 15 persons for the year ended December 31, 2018. These being the 15 individuals listed in the table in ITEM 6A above.

During 2018, we granted to our directors and officers listed in Item 6A above, in the aggregate, 90,000 RSUs at a weighted average grant date fair value per RSU of $25.85 and options to purchase 365,000 ordinary shares at a weighted average exercise price per share of $26.75. The options expire sixty-two months after grant. The weighted average grant date fair value of these options was $7.25 per option.

For a discussion of the accounting method and assumptions used in valuation of such options, see Note 2(r) to our consolidated financial statements included elsewhere in this annual report. See also "Item 6.E. - Directors, Senior Management and Employee – Share Ownership — Share Option Plans" below.

For a discussion of the compensation granted to our five most highly compensated executive officers during 2018, see "Compensation of Executive Officers" below, and for a discussion of the compensation paid to our non-employee directors, see "Compensation of Directors" below.

Compensation of Executive Officers

The table and summary below outline the compensation granted to our five most highly compensated executive officers during or with respect to the year ended December 31, 2018. We refer to the five individuals for whom disclosure is provided herein as our "Covered Executives."

For purposes of the table and the summary below, "compensation" includes base salary, bonuses, equity-based compensation, retirement or termination payments, benefits and perquisites such as car, phone and social benefits and any undertaking to provide such compensation. All amounts reported in the table are in terms of cost to the Company, as recognized in our financial statements for the year ended December 31, 2018.

Name and Principal Position (1)	Year	Salary	Bonus (including Sales Commissions) (2)	Equity-Based Compensation (3)	All Other Compensation (4)	Total
		(US$ in thousands)				
Roy Zisapel, Chief Executive Officer, President and Director*	2018	420(5)	360 (6)	2,320	136	3,236
Doron Abramovitch, Chief Financial Officer*	2018	304	118	694	93	1,209
Gabi Malka, Chief Operating Officer*	2018	274	109	231	68	682
Yoav Gazzele, VP Sales EMEA & CALA	2018	183	289	154	44	670
Amir Peles, VP Technologies*	2018	285	18	193	57	553

(1) Unless otherwise indicated herein, all Covered Executives are (i) employed on a full-time (100%) basis; and (ii) subject to customary confidentiality, intellectual property assignment and non-solicitation provisions as well as an undertaking not to compete with us or in our field of business for at least 12 months following termination of employment.

(2) Amounts reported in this column represent annual bonuses, including sales commissions. Consistent with our Compensation Policy, such bonuses are based upon (i) for non-sales executive officers - achievement of milestones and targets and the measurable results of the Company, as compared to our budget and/or work plan for the relevant year, with a portion of the bonus (up to 10% in the case of Roy Zisapel) being based on the achievement and performance of pre-determined individual key performance indicators (KPIs), and, in any event, not to exceed the amount of one (100%) annual base salary of such executive; and (ii) for sales executive officers - achievement of targets of revenues generated by the individual and/or his/her team or division and/or the Company, and in any event, not to exceed the amount of four annual base salaries of such executive.

(3) Amounts reported in this column represent the grant date fair value in accordance with accounting guidance for stock-based compensation. For a discussion of the assumptions used in reaching this valuation, see Note 2(r) to our consolidated financial statements included elsewhere in this annual report.

(4) Amounts reported in this column include benefits and perquisites, including those mandated by applicable law. Such benefits and perquisites may include, to the extent applicable to the Covered Executive, payments, contributions and/or allocations for savings funds (e.g., Managers Life Insurance Policy), education funds ('keren hishtalmut'), pension, severance, vacation, car or car allowance, medical insurances and benefits, risk insurances (e.g., life, or work disability insurance), phone, convalescence or recreation pay, relocation, payments for social security, tax gross-up payments and other benefits and perquisites consistent with Radware's guidelines. Unless otherwise indicated herein, all Covered Executives (i) are entitled to a notice period of at least 1 month prior to termination (other than termination for cause), during which they are generally entitled to all compensation and rights under their employment agreements; and (ii) are not entitled to any special bonuses or benefits upon a change of control of our Company, other than a potential acceleration of the vesting of their stock options pursuant to our equity incentive plan, as more fully described in Item 6E below.

(5) Mr. Roy Zisapel is entitled to a gross base salary of $300,000 (or the equivalent in NIS) per annum. However, he is also entitled to a quarterly payment of $25,000, effective as of the January 1, 2012 as compensation for his additional duties and tasks in the United States as manager of our entire on-going North America activities. The additional amount will be payable for as long as Mr. Zisapel maintains this additional position. The additional $20,000 over the aggregated total $400,000 annual salary is attributed to the change in the exchange rate of the $ vs. NIS since the date of the Shareholders' Annual General Meeting in 2012 approving Mr. Zisapel's salary and the average $/NIS exchange rate in 2018.

(6) Consistent with our Compensation Policy, and as approved by our shareholders in November 2015, Mr. Roy Zisapel is entitled to an annual bonus of up to $400,000 (or the equivalent in NIS).

* All or part of the base salary is denominated in NIS whereas our functional currency is dollars and therefore fluctuations in dollar amounts may be attributed to exchange rate fluctuations.

Compensation of Directors

An external director is entitled to consideration and reimbursement of expenses only as provided in regulations promulgated under the Israeli Companies Law and is otherwise prohibited from receiving any other compensation, directly or indirectly, in connection with his service as an external director.

Our non-employee directors, including external directors, are entitled to the following compensation: (i) annual compensation in the amount of NIS 120,800 (currently equivalent to approximately $33,750) per year of service; (ii) per meeting remuneration of NIS 3,600 (currently equivalent to approximately $1,000) for each board or committee meeting attended, provided that the director is a member of such committee; (iii) compensation for telephonic participation in board and committee meetings (where other members physically attend) in an amount of 60% of what is received for physical participation; and (iv) compensation for board and committee meetings held via electronic means without physical participation in an amount of 50% of what is received for physical meeting. All amounts payable under items (i), (ii), (iii) and (iv) above are subject to adjustment for changes in the Israeli consumer price index after December 2007 and changes in the amounts payable pursuant to Israeli law from time-to-time.

In addition, our non-employee directors, including external directors, are entitled to a grant of options under our stock option plans to purchase 20,000 ordinary shares for each year in which such non-employee director holds office. The options are granted for three years in advance, and therefore every director receives an initial grant of options to purchase 60,000 ordinary shares which vest over a period of three years, with a third (20,000) to vest upon each anniversary of service, provided that the director still serves on the Company's Board of Directors on the date of vesting. The grant is made on the date of the director's election (or the date of commencement of office, if different), and thereafter, every three years, if reelected, an additional grant of options to purchase an additional 60,000 ordinary shares will be made on the date of each annual meeting in which such director is reelected. The exercise price of all options shall be equal to the fair market value of the ordinary shares on the date of the grant (i.e., an exercise price equal to the market price of our ordinary shares on the date of the annual meeting approving the election or reelection of a director or the date of commencement of office, if different).

C. Board Practices

Introduction

Since we are incorporated as an Israeli company, we are subject to the provisions of the Companies Law and the regulations adopted thereunder. In addition, we are subject to the rules of the Nasdaq applicable to listed companies since our ordinary shares are listed on the Nasdaq Global Select Market.

According to the Companies Law and our Articles of Association, the oversight of the management of our business is vested in our Board of Directors. Our Board of Directors may exercise all powers and may take all actions that are not specifically granted to our shareholders. As part of its powers, our Board of Directors may cause us to borrow or secure payment of any sum or sums of money for our purposes, at times and upon terms and conditions as it determines, including the grant of security interests in all or any part of our property.

Our Articles of Association provide for a Board of Directors of not less than five and not more than nine directors. Currently, our Board of Directors consists of seven directors, including the external directors (as described below). In accordance with current Nasdaq requirements, nominees for election as directors are approved and recommended to the Board of Directors by a decision of a majority of our independent directors.

Under the Companies Law, our Board of Directors is required to determine the minimum number of directors having accounting and financial expertise, as defined in regulations promulgated under the Companies Law, that our Board of Directors should have. In determining the number of directors required to have such expertise, the Board of Directors must consider, among other things, the type and size of the company and the scope and complexity of its operations. Our Board of Directors has determined that we require at least one director with the requisite financial and accounting expertise and that Mr. Avraham Asheri has such expertise.

Staggered Board

In accordance with the terms of our Articles of Association, our Board of Directors (other than our external directors, as described below) is divided into three classes with each class of directors serving until the third annual meeting following their election as follows:

Class	Term expiring at the annual meeting for the year	Directors
Class I	2021	Yehuda Zisapel and Avraham Asheri
Class II	2019	Roy Zisapel and Joel Maryles
Class III	2020	Yael Langer

At each annual meeting of shareholders after the initial classification, the successors to directors whose terms will then expire will be elected to serve from the time of election and qualification until the third annual meeting following such election. Directors, other than external directors, are elected by a simple majority of the votes cast by our shareholders at an annual general meeting, whereas a director's removal from office requires the vote of at least seventy-five percent (75%) of the voting power represented at the general meeting. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, to the nearest extent possible, each class will consist of one-third of the directors. This classification of our Board of Directors may have the effect of delaying or preventing changes in control or management of our company.

The above classification does not apply to Mr. David Rubner and Prof. Yair Tauman, who were appointed as external directors and whose term of appointment ends in 2021 and 2019, respectively.

For a description of how long our directors and officers have served in their current positions, please see "Item 6A - Directors, Senior Management and Employees – Directors and Senior Management".

External Directors

Qualifications of External Directors

Under the Companies Law, companies incorporated under the laws of Israel whose shares are listed for trading on a stock exchange or have been offered to the public in or outside of Israel, such as Radware, are required to appoint at least two external directors. However, effective from April 2016, companies whose shares are traded on specified U.S. stock exchanges, including Nasdaq, and which do not have a controlling shareholder, such as Radware, may (but are not required to) elect to opt out of the requirement to maintain external directors or retain external directors but opt out of the composition requirements under the Companies Law with respect to either or both of the audit and compensation committees. After considering this matter, we have decided not to elect to opt out of any such requirements at this time.

Under the Companies Law, external directors are required to possess professional qualifications as set out in regulations promulgated under the Companies Law. To qualify as an external director, an individual (or the individual's relative, partner, employer or any entity under the individual's control) may not have, and may not have had at any time during the previous two years, any "affiliation" with:

- the company, the company's controlling shareholder or its relative, or another entity affiliated with the company or its controlling shareholder, or

- a company without a controlling shareholder (or a shareholder that owns more than 25% of its voting power), such as Radware, any person who, at the time of appointment, is the chairman, the chief executive officer, the chief financial officer or a 5% shareholder of the company.

The term affiliation includes:

- an employment relationship;
- a business or professional relationship;
- control; and
- service as an office holder, excluding service as a director that was appointed to serve as an external director of a company that is about to make its initial public offering.

The Companies Law defines the term “office holder” of a company to include a director, the chief executive officer, the chief financial officer, a vice president and any officer of the company that reports directly to the chief executive officer.

No person can serve as an external director if the person’s position or other business creates, or may create, a conflict of interest with the person’s responsibilities as an external director or may otherwise interfere with the person’s ability to serve as an external director.

Until the lapse of two years from termination of office as an external director, a company and its controlling shareholder may not provide compensation to an external director or his or her spouse and children or engage such persons to serve as an office holder and cannot employ or receive services from such persons, either directly or indirectly, including through a corporation controlled by that person. The same restriction applies to other family members of the external director but until the lapse of one year from termination of office as an external director.

Election of External Directors

External directors are to be elected by a majority vote at a shareholders’ meeting, provided that either:

- at least a majority of the shares of non-controlling shareholders voted at the meeting in favor of the election; or
- the total number of shares voted against the election of the external director does not exceed 2% of the aggregate voting rights in the Company.

The initial term of an external director is three years and may be extended for up to two additional three-year terms. Thereafter, in a company whose shares are listed for trading on, among others, the Nasdaq Global Select Market, such as Radware, he or she may be reelected by our shareholders for additional periods of up to three years each only if the Audit Committee and Board of Directors confirm that, in light of the external director's expertise and special contribution to the work of the Board of Directors and its committees, the reelection for such additional period is beneficial to the Company. Reelection of an external director may be effected through one of the following mechanisms: (1) the board of directors proposed the reelection of the nominee and the election was approved by the shareholders by the majority required to appoint external directors for their initial term as described above; or (2) a shareholder holding 1% or more of the voting rights proposed the reelection of the nominee or the external director himself or herself proposed their own reelection, and the reelection is approved by a majority of the votes cast by the shareholders of the company, excluding the votes of controlling shareholders and those who have a personal interest in the matter as a result of their relations with the controlling shareholders; provided that the aggregate votes cast in favor of the reelection by such non-excluded shareholders constitute more than 2% of the voting rights in the company.

External directors may be removed from office only by the vote of the same percentage of shareholders as is required for their election or by a court but, in both cases, only if they cease to meet the statutory qualifications for appointment or if they violate their duty of loyalty to the Company.

Each committee of the Company's board of directors is required to include at least one external director, except for the Audit and Compensation Committees which are required to be comprised of all the external directors.

Currently, Mr. David Rubner and Prof. Yair Tauman qualify as external directors under the Companies Law and were elected by the general shareholders meetings held in September 2018 and October 2016, respectively, to serve as our external directors for three-year terms ending in 2021 and 2019, respectively.

Under the Companies Law and regulations promulgated thereunder, (1) an external director must have either "accounting and financial expertise" or "professional qualifications" (as such terms are defined in regulations promulgated under the Companies Law) and (2) at least one of the external directors must have "accounting and financial expertise." However, companies whose shares are registered for trade outside of Israel, such as us, are in compliance with such requirements if all of their external directors have "professional qualifications" and one of their other independent directors has "accounting and financial expertise". Our Board of Directors has determined that Mr. Avraham Asheri, one of our other independent directors, has "accounting and financial expertise" and that Mr. David Rubner and Prof. Yair Tauman, our external directors, have "professional qualifications", and, therefore, we believe we satisfy these requirements.

Our Committees

The Board of Directors appoints committees to help carry out its duties. Each committee reports the results of its meetings to the full Board of Directors. The Board of Directors established an Audit Committee and a Compensation Committee and, from time to time, establishes other "ad-hoc" committees of members of the Board of Directors for specific duties or assignments and limited duration.

Audit Committee

Nasdaq Requirements

Our ordinary shares are listed on the Nasdaq Global Select Market, and we are subject to the Nasdaq rules applicable to listed companies. Under the Nasdaq rules, we are required to have an audit committee consisting of at least three independent directors, all of whom are financially literate and one of whom has accounting or related financial management expertise.

Our Board has determined that all directors serving on our Audit Committee (namely Mr. Avraham Asheri, Mr. David Rubner, Prof. Yair Tauman and Mr. Joel Maryles) meet the independence standards required of Audit Committee members by the Securities Exchange Act of 1934 and the Nasdaq rules. In addition, the Board of Directors has determined that Mr. Avraham Asheri is considered an "audit committee financial expert" (as defined by SEC rules).

In accordance with the Nasdaq rules, our Audit Committee has adopted a charter that sets forth the Audit Committee's purpose and responsibilities, which include, among other things, (1) assisting the Board of Directors in fulfilling its responsibility for oversight of the quality and integrity of our accounting, auditing and financial reporting practices and financial statements and the independence qualifications and performance of our independent auditors, and (2) selecting, evaluating and, where appropriate, recommending to replace the independent auditors (or to nominate the independent auditors subject to shareholder approval) and to pre-approve audit engagement fees and all permitted non-audit services and fees. Our Audit Committee must also review and approve all related party transactions specified under Item 7B of Form 20-F.

Our Audit Committee also functions as our Qualified Legal Compliance Committee, or the QLCC. In its capacity as the QLCC, our Audit Committee is responsible for investigating reports made by attorneys appearing and practicing before the SEC in representing us of perceived material violations of U.S. federal or state securities laws, breaches of fiduciary duty or similar violations by us or any of our agents.

Israeli Companies Law Requirements

Under the Companies Law, our Audit Committee must be comprised of at least three directors, include all of the external directors, a majority of its members must satisfy the independence standards under the Companies Law, and the chairman thereof is required to be an external director.

In accordance with the Companies Law, the duties of our Audit Committee, in addition to the requirements imposed by the Nasdaq rules, include, among other things, to (1) identify irregularities in the business management of the Company, including in consultation with the internal auditor and/or the Company's independent accountants, and to recommend remedial measures to the Board of Directors, (2) review, and, where appropriate, approve certain interested party transactions specified under the Companies Law, as more fully described below under the heading "Approval of Specified Related Party Transactions under Israeli Law", and (3) examine and monitor the work of our internal auditor.

Compensation Committee

Pursuant to applicable Nasdaq rules, the compensation payable to a company's chief executive officer and other executive officers must generally be approved by a compensation committee comprised solely of independent directors.

Under the Companies Law, our Board of Directors is required to appoint a compensation committee comprised of at least three directors and which shall include all of the company's external directors. The other members of the compensation committee must satisfy certain independence standards under the Companies Law, and the chairman is required to be an external director. Under the Companies Law, the role of the compensation committee includes recommending to the Board of Directors, for ultimate shareholder approval by a special majority, a policy governing the compensation of office holders based on specified criteria; reviewing, from time to time, modifications to the compensation policy and examining its implementation; approving the actual compensation terms of office holders prior to approval thereof by the Board of Directors; and resolving whether to exempt the compensation terms of a candidate for chief executive officer from shareholder approval.

Pursuant to its charter, our Compensation Committee is authorized to make decisions regarding executive compensation and terms and conditions of employment, to follow market trends and provide recommendations to the Board of Directors in connection with the Company's general compensation philosophy and policies, as well as to recommend that the Board of Directors issue options under our stock option plans. The Compensation Committee reviews and determines, on behalf of the Board of Directors, the amounts and types of compensation to be paid to the Company's Chief Executive Officer and other executive officers.

Our Compensation Committee currently consists of Mr. David Rubner and Prof. Yair Tauman, who are also our external directors, Mr. Joel Maryles and Mr. Avraham Asheri, all of whom are independent directors.

Nomination of Directors

Our independent directors consider and vote upon nominations to our Board of Directors.

Board and Committee Meetings

The table below describes the number of meetings and attendance rates of our Board of Directors, Audit Committee and Compensation Committee in 2018*:

Name of Body	No. of Meetings in 2018	Average Attendance Rate
Board of Directors	8	96 %
Audit Committee	6	100 %
Compensation Committee	8	100 %

* Excludes ad-hoc committees.

Each director attended at least 80% of all Board meetings.

Directors' Service Contracts

Except as described in Item 6B above, we do not, as of the date of filing of this Annual Report, have service or employment contracts with our directors providing for benefits upon termination of employment.

Internal Auditor

Under the Companies Law, the board of directors of a public company must appoint an internal auditor proposed by the audit committee. The role of the internal auditor is to examine, among other things, whether the company's conduct complies with applicable law and orderly business procedure. The internal auditor may participate in all audit committee meetings and has the right to demand that the chairman of the audit committee convene a meeting. Under the Companies Law, the internal auditor may be an employee of the company but may not be an interested party, an office holder or a relative of any of the foregoing, nor may the internal auditor be the company's independent accountant or its representative. Ms. Dana Gottesman – Erlich, CPA, CIA, Partner in BDO Ziv Haft, CPAs is our internal auditor.

Approval of Specified Related Party Transactions under Israeli Law

Fiduciary Duties of Office Holders

The Companies Law imposes a duty of care and a duty of loyalty on all office holders of a company.

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 regarding the advisability of a given action submitted for his or her approval or performed by him or her by virtue of his or her position; and
- All other important information pertaining to these actions.

The duty of loyalty of an office holder includes a duty to:

- Refrain from any conflict of interest between the performance of his/her duties in the company and the performance of his or her other duties or his or her 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/herself or others; and
- Disclose to the company any information or documents relating to the company's affairs which the office holder has received due to his/her position as an office holder.

Disclosure of Personal Interest of an Office Holder

The Companies Law requires that an office holder of a company disclose to the company any personal interest that he may have and all related material information known to him, in connection with any existing or proposed transaction by the company. The disclosure is required to be made promptly and in any event no later than the board of directors meeting in which the transaction is first discussed. If the transaction is an extraordinary transaction, the office holder's duty to disclose also applies to a personal interest of a relative of the office holder.

Under the Companies Law, an extraordinary transaction is a transaction:

- Other than 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.

Once an office holder complies with the above disclosure requirement, the board of directors may approve a transaction between the company and an office holder, or a third party in which an office holder has a personal interest unless the articles of association provide otherwise. Nevertheless, a transaction that is adverse to the company's interest may not be approved.

If the transaction is an extraordinary transaction, approval is required of both the audit committee and the board of directors, in that order. Under specific circumstances, shareholder approval may also be required. A director who has a personal interest in a matter which is considered at a meeting of the board of directors or the audit committee may not be present at this meeting or vote on this matter, unless a majority of the members of the board of directors or the audit committee, as the case may be, has a personal interest in the matter. If a majority of members of the board of directors have a personal interest therein, shareholder approval is generally also required.

Approval of Office Holder Compensation

Under the Companies Law, every Israeli public company, such as Radware, must adopt a compensation policy, recommended by the compensation committee, and approved by the board of directors and the shareholders, in that order. The shareholder approval requires a majority of the votes cast by shareholders, excluding any controlling shareholder and those who have a personal interest in the matter. In general, all office holders' terms of compensation – including fixed remuneration, bonuses, equity compensation, retirement or termination payments, indemnification, liability insurance and the grant of an exemption from liability – must comply with the company's compensation policy. In October 2013, our shareholders approved the Compensation Policy, in November 2015 they approved several amendments thereto and in September 2018 our shareholders ratified our Compensation Policy.

In addition, the compensation terms of directors, the chief executive officer, and any employee or service provider who is considered a controlling shareholder must be approved separately by the compensation committee, the board of directors and, subject to certain exceptions, the shareholders of the company (by the same majority noted above), in that order. The compensation terms of other officers generally require the approval of the compensation committee and the board of directors.

Disclosure of Personal Interests of a Controlling Shareholder

Under the Companies Law, the disclosure requirements which apply to an office holder also apply to a controlling shareholder of a public company. A controlling shareholder is a shareholder who has the ability to direct the activities of a company, including a shareholder that owns 25% or more of the voting power in the company, if no other shareholder owns more than 50% of the voting power in the company, but excluding a shareholder whose power derives solely from his or her position on the board of directors or any other position with the company.

Extraordinary transactions of a public company with a controlling shareholder or with a third party in which a controlling shareholder has a personal interest, and the terms of engagement of a controlling shareholder as an office holder or employee, generally require the approval of the audit committee, the board of directors and the shareholders of the company in that order. The shareholder approval must be by a majority of the shares voted on the matter, provided that either:

- At least a majority of the shares of shareholders who have no personal interest in the transaction, and who are present and voting (in person, by proxy or by written ballot) vote in favor thereof; or

- The shareholders who have no personal interest in the transaction who vote against the transaction do not represent more than 2% of the voting power in the company.

In addition, any such extraordinary transaction whose term is longer than three years may require further shareholder approval every three years, unless, where permissible under the Companies Law, the audit committee approves that a longer term is reasonable under the circumstances.

General Duties of Shareholders

Under the Companies Law, each shareholder has a duty to act in good faith in exercising his rights and fulfilling his obligations toward the company and other shareholders and to refrain from abusing his power in the company, such as shareholder votes. Furthermore, specified shareholders have a duty of fairness toward the company. These shareholders include any controlling shareholder, any shareholder who knows that he/it possesses the power to determine the outcome of a shareholder vote, and any shareholder who, pursuant to the provisions of the articles of association, has the power to appoint or to prevent the appointment of an office holder or any other power toward the company.

D. Employees

At the time of commencement of employment, our employees in North America generally sign offer letters specifying basic terms and conditions of employment, whereas our employees in Israel, including our executive officers, generally sign standard written employment agreements, which include confidentiality and non-compete provisions. The employees in our other jurisdictions sign employment agreements, which differ according to customary practices in the country in which they are located.

The following table details certain data on our workforce (including temporary employees and subcontractors) as at the period indicated:

	As at December 31,		
	2018	2017	2016
Approximate numbers of employees and subcontractors by geographic location:			
Israel	456	450 (**)	451 (**)
United States	196	209	209
Other	309 (*)	319 (*)	319 (*)
Total workforce	961	978	979
Approximate numbers of employees and subcontractors by category of activity:			
Research and development	372 (*)	381 (*)	389 (*)
Sales, technical support, business development and marketing	452	474	473
Management, operations and administration	137	123	117
Total workforce	961	978 (**)	979 (**)

(*) Include 56, 61 and 71 subcontractors, as of December 31, 2018, 2017 and, 2016, respectively.
(**) Include 0, 0 and 14 employees, as of December 31, 2018, 2017 and 2016, respectively, in Radyoos, our Israeli-based subsidiary which was engaged in developing and operating a web-based e-commerce platform, and not in our core business.

We are subject to Israeli labor laws and regulations with respect to our Israeli employees. These laws principally concern matters such as paid annual vacation, paid sick days, length of the workday and work week, minimum wages, pay for overtime, insurance for work-related accidents, severance pay and other conditions of employment.

Furthermore, our Israeli employees and we are subject to provisions of the collective bargaining agreements between the “Histadrut”, the General Federation of Labor in Israel, and the Coordination Bureau of Economic Organizations, including the Industrialists Association, by governmental order. These provisions principally concern social benefits, cost of living increases, recreation pay and other conditions of employment. We generally provide our employees with benefits and working conditions above the required minimums.

Our employees are not represented by a labor union. The employees of our subsidiaries are subject to local labor laws, regulations and/or collective bargaining agreements that vary from country to country.

We consider our relations with our employees to be good, and we have never experienced a strike or work stoppage.

E. Share Ownership

The following table sets forth certain information regarding the beneficial ownership of our ordinary shares by our directors and officers as of April 12, 2019.

Name	Number of ordinary shares*	Percentage of outstanding ordinary shares**	
Yehuda Zisapel (1)	1,525,276	3.24	%
Roy Zisapel (2)	1,440,755	3.06	%
Avraham Asheri (3)	*	*	
Yael Langer (3)	*	*	
David Rubner (3)	*	*	
Yair Tauman (3)	*	*	
Joel Maryles (3)	*	*	
Doron Abramovitch (3)	*	*	
Gabi Malka (3)	*	*	
David Aviv (3)	*	*	
Sharon Trachtman (3)	*	*	
Anna Convery-Pelletier (3)	*	*	
Yoav Gazelle (3)	*	*	
Terence Ying (3)	*	*	
Amir Peles (3)	*	*	
All directors and executive officers as a group (15 persons) (4)	3,306,531	6.97	%

* Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Ordinary shares relating to options or RSUs currently exercisable or exercisable (vested in the case of RSUs) within 60 days of the date of this table are deemed outstanding for computing the percentage of the person holding such securities but are not deemed outstanding for computing the percentage of any other person. Except as indicated by footnote, and subject to community property laws where applicable, the persons named in the table above have sole voting and investment power with respect to all shares shown as beneficially owned by them.

** The percentages shown are based on 46,958,976 ordinary shares issued and outstanding as of April 12, 2019. This figure of outstanding ordinary shares excludes employee stock options to purchase an aggregate of 450,500 ordinary shares at a weighted average exercise price of approximately $14.71 per share, with the latest expiration date of these options being in November 2022 (of which, options to purchase 435,500 of our ordinary shares were exercisable as of April 12, 2019).

(1) Of the ordinary shares beneficially owned by Mr. Yehuda Zisapel (i) 1,465,276 are held directly by Yehuda Zisapel; and (ii) 60,000 options to purchase ordinary shares are fully vested or will be fully vested with Yehuda Zisapel within the next 60 days, at an exercise price of $15.33 per share, expiring in January 2021. In addition, Nava Zisapel holds 2,860,776 ordinary shares which are not included in the total shares reported above as beneficially owned by Yehuda Zisapel. Yehuda and Nava Zisapel have an agreement which provides for certain coordination in respect of sales of shares of Radware as well as for tag along rights with respect to off-market sales of shares of Radware.

(2) Consists of 1,390,755 shares and 50,000 options to purchase ordinary shares which options are fully vested or will be fully vested within the next 60 days. All of the options are at an exercise price of $15.33 and expire in January 2021.

(3) Owns less than 1% of our outstanding ordinary shares (including options held by each such party, which are vested or shall become vested within 60 days of the date of this annual report) and have therefore not been separately disclosed.

(4) Consists of 2,856,031 shares and 450,500 options to purchase ordinary shares which options are fully vested or which will be fully vested within the next 60 days. The options consist of (i) 35,000 options at an exercise price of $12.46 which expire in September 2021, (ii) 10,000 options at an exercise price of $13.06 which expire in April 2021, (iii) 25,000 options at an exercise price of $13.35 which expire in December 2021, (iv) 102,500 options at an exercise price of $14.00 which expire in April 2021, (v) 20,000 options at an exercise price of $14.38 which expire in January 2022, (vi) 15,000 options at an exercise price of $14.68 which expire in April 2022, (vii) 15,000 options at an exercise price of $15.17 which expire in June 2022, (viii) 188,000 options at an exercise price of $15.33 which expire in January 2021, (ix) 10,000 options at an exercise price of $16.07 which expire in June 2019, (x) 20,000 options at an exercise price of $16.67 which expire in November 2022, and (xi) 10,000 options at an exercise price of $17.87 which expire in November 2019. In addition, Nava Zisapel holds 2,860,776 ordinary shares which are not included in the total shares reported above as beneficially owned by Yehuda Zisapel. Yehuda and Nava Zisapel have an agreement which provides for certain coordination in respect of sales of shares of Radware as well as for tag along rights with respect to off-market sales of shares of Radware.

Key Employee Share Incentive Plan

In August 1997, we adopted our Key Employee Share Incentive Plan (1997), as amended, or the Share Incentive Plan. Under the plan, stock options as well as restricted stock units, or RSUs, may be granted to employees employed by us or by our affiliates.

The Share Incentive Plan is administered by the Compensation Committee subject to the provisions of the Companies Law. Pursuant to the plan, the Compensation Committee has the authority to determine (subject to applicable law), or advise the Board of Directors, in its discretion:

- the persons to whom options or RSUs are granted;
- the number of shares underlying each equity award;
- the time or times at which the award shall be made;
- the exercise price, vesting schedule and conditions pursuant to which the awards are exercisable, including cashless exercises; and
- any other matter necessary or desirable for the administration of the plan.

In addition, the Share Incentive Plan provides that, unless otherwise determined otherwise by our Board of Directors (or a committee thereof), in the event of a "Hostile Takeover", which is defined to include, among others, an unsolicited acquisition of more than 20% of our outstanding shares (other than a purchase by Mr. Yehuda Zisapel), the vesting of all or a portion of our outstanding equity awards, will accelerate. As a result, an acquisition of our Company that triggers the said acceleration will be more costly to a potential acquirer.

Options granted pursuant to the Share Incentive Plan are typically granted for a term of sixty-two months from the date of the grant of the option. As of December 31, 2018, 31,902,967 ordinary shares have been reserved for equity grants under the plan, of which we have granted (i) options to purchase 27,598,899 ordinary shares at a weighted average exercise price of $7.87 per ordinary share and (ii) 2,066,109 RSUs have been issued under the plan.

The Share Incentive Plan allows the allocation of short term options to grantees who are not residents of Israel or the United States, with a grant price of 90% of the closing sales price for the shares on the Nasdaq on the date of grant of a respective option award. As of December 31, 2018, 1,000,000 ordinary shares have been reserved for option grants under this arrangement, of which we have granted options to purchase 236,694 ordinary shares at a weighted average exercise price of $7.09 per ordinary share. This arrangement does not affect the possibility of issuing options under the Share Incentive Plan as detailed above. However, any person who participates in the ESPP (as defined below) shall not be an eligible grantee for purposes of such arrangement.

Directors and Consultants Option Plan

In February 2000, we adopted a Directors and Consultants Option Plan, which is administered by our Compensation Committee. Options granted pursuant to our Directors and Consultants Options Plan are for a term of sixty-two months from the date of the grant of the option. The terms of the Directors and Consultants Option Plan are similar to the terms of the Share Incentive Plan. The Directors and Consultants Option Plan relies on the 31,902,967 ordinary shares reserved for option grants shares under the Share Incentive Plan which can be rolled over between such plans. The Compensation Committee may not grant options to members of the Committee or to a shareholder of over 10% of our issued and outstanding shares.

Employee Share Purchase Plan

In February 2010, our Board of Directors adopted the 2010 Employee Share Purchase Plan ("ESPP"), which provides for the issuance of a maximum of 2,000,000 ordinary shares. Pursuant to the ESPP, eligible employees (including only Israeli and United States residents) could have up to 10% of their net income withheld, up to certain maximums, to be used to purchase our ordinary shares. The ESPP is implemented with overlapping one year offering periods, each one consisting of two purchases, once in every six-month period. The price of each ordinary share purchased under the ESPP is equal to 90% of the closing price for the shares on the respective offering date. As of December 31, 2018, a total of 255,560 shares have been purchased under the ESPP. During 2018, no shares have been purchased under the ESPP.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. Major Shareholders

The following table sets forth certain information regarding the beneficial ownership of our ordinary shares as of April 12, 2019, by each person or entity known to own beneficially more than 5% of our outstanding ordinary shares based on information provided to us by the holders or disclosed in public filings with the SEC. The voting rights of all major shareholders are the same as for all other shareholders.

Name	Number of ordinary shares*	Percentage of outstanding ordinary shares**	
Senvest Management, LLC (1)	5,832,115	12.42	%
Cadian Capital Management, LP(2)	3,649,771	7.77	%
Nava Zisapel (3)	2,860,776	6.09	%

* Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Ordinary shares relating to options or RSUs currently exercisable or exercisable (vested in the case of RSUs) within 60 days of the date of this table are deemed outstanding for computing the percentage of the person holding such securities but are not deemed outstanding for computing the percentage of any other person. Except as indicated by footnote, and subject to community property laws where applicable, the persons named in the table above have sole voting and investment power with respect to all shares shown as beneficially owned by them.

** The percentages shown are based on 46,958,976 ordinary shares issued and outstanding as of April 12, 2019. This figure of outstanding ordinary shares excludes employee stock options to purchase an aggregate of 450,500 ordinary shares at a weighted average exercise price of approximately $14.71 per share, with the latest expiration date of these options being in November 2022 (of which, options to purchase 435,500 of our ordinary shares were exercisable as of April 12, 2019).

(1) Shares are beneficially owned by Senvest Management, LLC and Mr. Richard Mashaal (collectively, “Senvest”). This information is based on information provided in the Amendment No. 14 to Statement on Schedule 13G filed with the SEC by Senvest on February 8, 2019. The business address of Senvest is 540 Madison Avenue 32nd Floor New York, New York 10022.

(2) This information is based on information provided in the Amendment No. 3 to Statement on Schedule 13G filed with the SEC by Cadian Capital Management, LP , Cadian Capital Management GP, LLC and Mr. Eric Bannasch (collectively, “Cadian”) on February 13, 2019. The business address of Cadian is 535 Madison Avenue 36th Floor New York, New York 10022.

(3) Of the ordinary shares beneficially owned by Ms. Nava Zisapel, (i) 2,592,943 are held directly; and (ii) 267,833 are held of record by Carm-AD Ltd., an Israeli company owned 100% by Nava Zisapel; As noted in note 1 in “Item 6E – Share Ownership”, Yehuda and Nava Zisapel have an agreement which provides for certain coordination in respect of sales of shares of Radware as well as for tag along rights with respect to off-market sales of shares of Radware. The information regarding Ms. Nava Zisapel’s share holdings is based on information provided in the Amendment No. 4 to Statement on Schedule 13D filed with the SEC by Mr. Yehuda Zisapel and Ms. Nava Zisapel on February 19, 2019. The business address of Ms. Nava Zisapel is 127 Habarzel St. Tel Aviv, 69710 Israel.

To the best of our knowledge, the Company is not directly or indirectly owned or controlled by another corporation, by any foreign government or by any other natural or legal person severally or jointly. There are no arrangements, known to the Company, the operation of which may at a subsequent date result in a change in control of the Company.

Significant Changes in the Ownership of Major Shareholders

During the past three years, the significant changes in the percentage ownership of our major shareholders were as follows:

- Based on Amendment No.14 to Statement on Schedule 13G filed with the SEC by Senvest on February 8, 2019, Senvest beneficially owned 12.88% of our outstanding ordinary shares. Based on previous amendments to the Schedule 13G filed with the SEC by Senvest, Senvest beneficially owned (i) as of February 12, 2018, 13.53% of our outstanding ordinary shares and (ii) as of February 13, 2017,14.16% of our outstanding ordinary shares.

- Based on Amendment No.3 to Statement on Schedule 13G filed with the SEC by Cadian on February 13, 2019, Cadian beneficially owned 8.1% of our outstanding ordinary shares. Based on previous amendments to the Schedule 13G filed with the SEC by Cadian, Cadian beneficially owned (i) as of February 13, 2018, 6.2% of our outstanding ordinary shares and (ii) as of February 13, 2017, 9.71% of our outstanding ordinary shares.

- Pursuant to Amendment No. 4 to Statement on Schedule 13D filed with the SEC by Mr. Yehuda Zisapel and Ms. Nava Zisapel on February 19, 2019, Mr. Yehuda Zisapel reported that he has sold and aggregate amount of 58,214 shares in February 2019.

Major Shareholders Voting Rights

Our major shareholders do not have different voting rights from those of other shareholders.

Record Holders

Based on a review of the information provided to us by our transfer agent, as of April 12, 2019, there were 26 holders of record of our ordinary shares, of which 16 record holders, holding approximately 8.09% of our ordinary shares, had registered addresses in Israel, and of which seven record holders, holding approximately 91.9% of our ordinary shares, had registered addresses in the United States. These numbers are not representative of the number of beneficial holders of our ordinary shares nor is it representative of where such beneficial holders reside, since many of these ordinary shares were held of record by brokers or other nominees (including one U.S. nominee company, CEDE & Co., which held approximately 91.9% of our outstanding ordinary shares as of said date).

B. Related Party Transactions

General

We have entered into a number of agreements with certain companies, of which Yehuda, Nava and Zohar Zisapel are co-founders, directors and/or principal stockholders, collectively known as the RAD-Bynet Group and, in one of which, SecurityDam, Roy Zisapel, our President and Chief Executive Officer and a director, also holds a minority stake of 10%. In addition, we purchase different services and fixed assets from third parties at special rates offered to the RAD-Bynet Group, such as car leases, maintenance, insurance communication. We also purchase Managed Security Service Providers (MSSP) scrubbing centers services from SecurityDam.

The RAD-Bynet Group consists of high-tech manufacturers of hardware and software solutions and data communication providers, distributors and integrators as well as service providers. The RAD-Bynet Group includes companies dealing in advanced communication technology, Managed Security Service Providers (MSSP) scrubbing centers services (from SecurityDam), networks, and integration. Companies within the RAD-Bynet Group provide a variety of solutions and services to their customers, including: engineering, purchasing and sub-contracting, production and final testing, planning and control, and support for end users. The RAD-Bynet Group also includes a few companies which provide services which support the activities of the other RAD-Bynet Group members, such as real estate leasing and administrative services. Some of the products of members of the RAD-Bynet Group are complementary to, and may be used in connection with, our products. Each company in the RAD-Bynet Group is independent from the others. The ownership and Board of Directors structure of each RAD-Bynet Group member is different and certain of the RAD-Bynet Group members are publicly traded companies. See Item 4C – Organizational Structure." for additional details about the group.

We believe that all of these transactions and arrangements with affiliated parties, including members of the RAD-Bynet Group, are in the ordinary course of our business and are not unusual in their nature or conditions. However, in accordance with the Companies Law, they generally require the approval of our Audit Committee and our Board of Directors and may, in certain circumstances, require approval by our shareholders. In this respect, as permitted by the Companies Law, our Audit Committee established internal policies with certain criteria and procedures designed to ensure that the terms of the transactions to which we enter into with companies within the RAD-Bynet Group are made on market terms and, at the same time, where such transactions are immaterial or negligible, both from a qualitative and quantitative perspective (and/or are otherwise believed to be routine) would not require the pre-approval of our Audit Committee and Board of Directors. Our management is required to examine whether transactions with the RAD-Bynet Group comply with such criteria and transactions which do not meet the criteria require pre-approval of our Audit Committee and such other corporate approvals prescribed by the Companies Law.

We believe that the terms of the transactions to which we have entered with members of the RAD-Bynet Group are not different in any material respect from terms we could obtain from unaffiliated third parties. The pricing of the transactions was based on negotiations between the parties and members of our management reviewed the pricing of these agreements, as well as, in some cases, used a third-party consulting firm, and confirmed that they were not different in any material respect than that which could have been obtained from unaffiliated third parties.

In the event that we cease to be a member of the RAD-Bynet Group, we may not be able to obtain the current rates for such services. We believe, however, that due to the affiliation between us and the RAD-Bynet Group, we have greater flexibility in obtaining certain terms and conditions that may not be available from unaffiliated third parties on similar products and services.

Lease of Property

We lease the office space for our headquarters and principal R&D, administrative, finance and marketing and sales operations from private companies within the RAD-Bynet Group that are owned by Zohar Zisapel, Nava Zisapel and Yehuda Zisapel:

- One lease or the “Headquarters Lease” is a five-story building in Tel Aviv, Israel, consisting of approximately 40,000 square feet, plus storage and parking space. The lease expires in June 2020. The annual rent amounts to approximately $703,000.

- Another lease consists of four floors in the Or Tower in Tel Aviv, Israel with approximately 60,000 square feet, plus parking spaces. The lease expires in June 2020. The annual rent amounts to approximately $1,800,000.

- We also lease approximately 3,600 square feet of space in Jerusalem, Israel, for development facilities from an affiliated company owned by Messrs. Yehuda and Zohar Zisapel. This lease expires in August 2020. The annual rent amounts to approximately $89,000.

- In addition, we lease approximately 15,000 square feet of space in Jerusalem, Israel, for manufacturing facilities from an affiliated company owned by Yehuda Nava and Zohar Zisapel. This lease expires in August 2019. The annual rent amounts to approximately $276,000.

We entered into an agreement with Zohar & Y Zisapel Real Estate LLC., a company controlled by Yehuda, Nava and Zohar Zisapel, pursuant to which we lease approximately 16,900 square feet in Mahwah, New Jersey, consisting of approximately 12,700 square feet of office space and 4,200 square feet of warehouse space, in consideration for annual rent of approximately $263,000 (including taxes, electricity and management fees). The lease expires in December 2025.

Distribution Agreement

Bynet Data Communications Ltd. ("Bynet"), a member of the RAD-Bynet Group, distributes our products in Israel on a non-exclusive basis. We have a written distributor agreement with Bynet under which we provide Bynet Data Communications with discounts on our products and services similar to the discounts provided to third-party distributors in the region in the ordinary course of business. The total sales to Bynet (and other companies in the RAD-Bynet Group) under such distributor agreement amounted to approximately $2.5 million in 2018, compared to $2.6 million in 2017.

Managed Security Service Provider ("MSSP") Agreement

SecurityDAM Ltd., or SecurityDam, a member of the RAD-Bynet Group, provides some of our DDoS cloud protection service against high-volume network floods. SecurityDam offers these MSSP services through a global network of scrubbing centers. Total cost of services received from SecurityDam amounted to approximately $7.0 million in 2018, compared to $4.3 million in 2017.

Additional RAD-Bynet Group Services

We receive the following additional services from members of the RAD-Bynet Group: network management; IT and communication services; equipment testing and repair; electricity charges; parking and building maintenance; reception services; vehicles and human resource administration; distribution services; and marketing services. Each of these additional services is not material, individually or in the aggregate, to Radware or the other members of the RAD-Bynet Group.

A portion of the above services, such as electricity charges, are "pass through" services for which we are charged on a "back-to-back" basis according to our actual usage (i.e., we are charged pro ratably based on the actual charge of the third party electricity company) due to the fact that we lease part of our facilities from a number of other RAD-Bynet Group members. Other services mentioned above, such as vehicles and human resource administration, are performed by one of the RAD-Bynet Group companies and are provided to all members of the RAD-Bynet Group, in order to achieve lower prices for these services based on economies of scale. In addition, since the RAD-Bynet Group is comprised of a number of companies which are engaged in our industry, the RAD-Bynet Group companies initiate marketing events from time to time, which we participate in, to promote the RAD-Bynet Group members' products. The charges for these services are based on actual costs incurred and are allocated to the Company according to its relative part in such services (e.g., vehicles administration – according to the number of the Company's vehicles out of the total vehicles of the RAD-Bynet Group; marketing events – according to the number of participants of the Company's customers out of the total participants in the events).

All other services, such as communication and distribution services are provided to us on the same basis and terms as provided to unrelated companies outside the RAD-Bynet Group, and were compared to prices the Company could have obtained from unaffiliated third parties and were found to be equal or less expensive. All services are charged on a monthly basis and on terms which are generally typical for other third party providers of the Company.

Compensation of Chief Executive Officer

See discussion in Item 6A "Directors, Senior Management and Employees – Directors and Senior Management".

C. Interests of Experts and Counsel

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. Consolidated Statements and other Financial Information

Financial Statements

See “Item 18 - Financial Statements”.

Export Sales

For the year ended December 31, 2018, the amount of our export sales (i.e., sales outside Israel) was approximately $226 million, which represents 97% of our total revenues.

Legal Proceedings

We are, or may be, from time to time named as a defendant in certain routine litigation incidental to our business. However, except for the matters described below, we are currently not, and have not been in the recent past, a party to any legal proceedings which may have or have had in the recent past significant effects on our financial position or profitability.

Intellectual Property Dispute with F5

In April 2016, F5 Networks, Inc. (“F5”) filed a lawsuit against us in the United States District Court for the Western District of Washington, alleging infringement of three U.S. patents of F5 relating to our ADC and WAF products. In December 2016, we filed an amended counterclaim in this action for patent infringement of a recently issued Radware patent directed to outbound link load balancing. In June 2017, the case was transferred to the United States District Court for the Northern District of California. On November 19, 2018, the Court granted partial summary judgment of non-infringement of the Company’s patent. We deny that any of our products infringe any valid claims of the asserted F5 patents and we intend to continue to vigorously oppose F5’s claims.

Dividend Distribution Policy

We have never paid and do not intend to pay cash dividends on our ordinary shares in the foreseeable future. In recent years and specifically in the past six consecutive years, our Board of Directors has approved “buy-back” programs of our shares, which we implement based on market conditions, share price, trading volume and other factors. Otherwise, our policy is to retain earnings and other cash resources to continue the development and expansion of our business. Any future dividend policy will be determined by our Board of Directors and will be based upon conditions then existing, including our results of operations, financial condition, current and anticipated cash needs, contractual restrictions and other conditions. See also Item 10B “- Dividend and Liquidation Rights.”

B. Significant Changes

Except as otherwise disclosed in this annual report, we are not aware of any significant changes that have occurred since December 31, 2018.

ITEM 9. THE OFFER AND LISTING

A. Offer and Listing Details

Our ordinary shares have been listed for quotation on the Nasdaq Global Select Market since September 30, 1999 under the symbol “RDWR”. From May 12, 2004 to March 8, 2009, our ordinary shares were also listed on the Tel Aviv Stock Exchange, or TASE. We voluntarily delisted our ordinary shares from the TASE primarily due to low trading volume.

B. Plan of Distribution

Not applicable.

C. Markets

Our ordinary shares are listed for quotation on the Nasdaq Global Select Market under the symbol “RDWR”.

D. Selling Shareholders

Not applicable.

E. Dilution

Not applicable.

F. Expenses of the Issue

Not applicable.

ITEM 10. ADDITIONAL INFORMATION

A. Share Capital

Not applicable.

B. Memorandum and Articles of Association

Set out below is a description of certain provisions of our Memorandum of Association and Articles of Association, and of the Companies Law related to such provisions. This description is only a summary and does not purport to be complete and is qualified by reference to the full text of the Memorandum and Articles which are incorporated by reference to exhibits to this annual report.

We were first registered under Israeli law on May 16, 1996 as a private company, and on November 18, 1999 became a public company. Our registration number with the Israeli registrar of companies is 52-004437-1.

Objects and Purposes

Pursuant to our Articles of Association, our objective is to engage, directly or indirectly, in any lawful undertaking or business whatsoever, including, without limitation, as stipulated in our Memorandum of Association, which was filed with the Israeli Registrar of Companies.

Shares; Transfer of Shares

Our registered capital is divided into 60,000,000 ordinary shares of nominal (par) value NIS 0.05 each. There are no other classes of shares. All of our outstanding shares are fully paid and non-assessable. The shares do not entitle their holders to preemptive rights and fully paid ordinary shares may be freely transferred pursuant to our Articles of Association unless such transfer is restricted or prohibited by another instrument.

Dividend and Liquidation Rights

According to the Israeli Companies Law, a company may distribute dividends only out of its “profits,” as such term is defined in the Israeli Companies Law, as of the end of the most recent fiscal year or as accrued over a period of two years, whichever is higher. Our Board of Directors is authorized to declare dividends, provided 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, and provided further that our shareholders approve the final dividend declared by the Board of Directors, in an amount not to exceed the Board of Directors’ recommendation. Notwithstanding the foregoing, even where there are no sufficient profits, dividends may be paid with the approval of a court, provided 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. Profits, for purposes of the Israeli Companies Law, means the greater of retained earnings or earnings accumulated during the preceding two years, after deduction of previous distributions that were not already deducted from the surplus, as evidenced by financial statements prepared no more than six months prior to the date of distribution.

In the event of our liquidation, after satisfaction of liabilities to creditors, our assets will be distributed to the holders of ordinary shares in proportion to their respective holdings. This liquidation right may be affected by the grant of preferential dividends or distribution rights to the holders of a class of shares with preferential rights that may be authorized in the future.

Voting, Shareholders' Meetings and Resolutions

We have two types of general shareholder meetings: the annual general meeting and the extraordinary general meeting. An annual general meeting must be held once in every calendar year, but not more than 15 months after the last annual general meeting. The Board of Directors may convene an extraordinary general meeting whenever it deems fit, and is obliged to do so upon the request of any of: (i) two directors or one fourth of the then serving directors; (ii) one or more shareholders who hold at least 5% of the issued share capital and at least 1% of the voting rights; or (iii) one or more shareholders who hold at least 5% of the voting rights.

In accordance with our Articles of Association, unless a longer period for notice is prescribed by the Israeli Companies Law, at least seven days and not more than forty-five days' notice of any general meeting of shareholders must be given. Under the Companies Law, shareholder meetings generally require prior notice of not less than 21 days or, with respect to certain matters, such as election of directors and affiliated party transactions, not less than 35 days.

Holders of ordinary shares have one vote for each ordinary share held on all matters submitted to a vote of shareholders. A shareholder may only vote the shares for which all calls have been paid, except in separate general meetings of a particular class.

The quorum required for an ordinary meeting of shareholders consists of at least two shareholders present in person or by proxy who hold or represent between them at least 35% of the outstanding voting shares unless otherwise required by applicable rules. A meeting adjourned for lack of a quorum, if convened upon requisition under the provisions of the Companies Law, shall be dissolved, but in any other case is adjourned to the same day in the following week at the same time and place or any time and place as the chairman may designate with the consent of a majority of the voting power represented at the meeting and voting on the matter adjourned. At such reconvened meeting, the required quorum consists of any two members present in person or by proxy.

Under the Companies Law, unless otherwise provided in the Articles of Association or applicable law, all resolutions of the shareholders require a simple majority of the shares present, in person or by proxy, and voting on the matter. However, our articles of association require approval of at least 75% of the shares present and voting to increase our share capital or to change its structure, grant any special rights to the holders of a class of shares with preferential rights or change such rights previously granted or remove directors from office.

Subject to the Companies Law, a resolution in writing signed by the holders of all of our ordinary shares entitled to vote at a meeting of shareholders or to which all such shareholders have given their written consent is required to adopt the resolution in lieu of a meeting.

General Duties of Shareholders

Under the Companies Law, each and every shareholder has a duty to act in good faith in exercising his rights and fulfilling his obligations towards the company and other shareholders and refrain from abusing his power in the company, such as in voting in the general meeting of shareholders on the following matters:

- any amendment to the articles of association;
- an increase of the company’s authorized share capital;
- a merger; or
- approval of certain related party transactions and actions, which require shareholder approval pursuant to the Companies Law.

In addition, each and every shareholder has the general duty to refrain from depriving rights of other shareholders.

Furthermore, any controlling shareholder, any shareholder who knows that it possesses the power to determine the outcome of a shareholder vote and any shareholder that, pursuant to the provisions of the articles of association, has the power to appoint or to prevent the appointment of an office holder in the company or any other power toward the company is under a duty to act in fairness towards the company. These various shareholder duties may restrict the ability of a shareholder to act in what the shareholder perceives to be its own best interests.

Restrictions on Non-Israeli Residents

The ownership or voting of our ordinary shares by non-residents of Israel, except with respect to citizens of countries which are in a state of war with Israel, is not restricted in any way by our Memorandum of Association or Articles of Association or by the laws of the State of Israel.

Mergers and Acquisitions under Israeli Law

There are no specific provisions of our Memorandum or Articles of Association that would have an effect of delaying, deferring or preventing a change in control of us or that would operate only with respect to a merger, acquisition or corporate restructuring involving us (or any of our subsidiaries), except those relating to the staggered board as described in Item 6 above and certain provisions of the Companies Law described below, which may have such effect.

The Israeli Companies Law includes provisions that allow a merger transaction and requires that each company that is party to a merger approve the transaction by its board of directors and a vote of the majority of its shares, voting on the proposed merger at a shareholders meeting. For purposes of the shareholder vote, unless a court rules otherwise, the merger will not be deemed approved if shares, representing a majority of the voting power present at the shareholders meeting and which are not held by the other party to the merger (or by any person who holds 25% or more of the voting power of the right to appoint 25% or more of the directors of the other party), vote against the merger. Upon the request of a creditor of either party of 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 completed unless at least (i) 50 days have passed from the time that a proposal of the merger has been filed with the Israeli Registrar of Companies by each merging company and (ii) 30 days have passed since the merger was approved by the shareholders of each merging company.

In addition, provisions of the Companies Law that deal with "arrangements" between a company and its shareholders may be used to effect squeeze-out transactions in which the target company becomes a wholly-owned subsidiary of the acquirer. These provisions generally require that the merger be approved by a majority of the participating shareholders holding at least 75% of the shares voted on the matter. In addition to shareholder approval, court approval of the transaction is required, which entails further delay. The Companies Law also provides for a merger between Israeli companies, after completion of the above procedure for an "arrangement" transaction and court approval of the merger.

The Companies Law also provides that an acquisition of shares of a public company must be made by means of a "special" tender offer if as a result of the acquisition (1) the purchaser would become a 25% or greater shareholder of the company and there is no 25% or greater shareholder in the company, or (2) the purchaser would become a 45% or greater shareholder of the company and there is no 45% or greater shareholder in the company. These requirements do not apply if, in general, the acquisition (1) was made in a private placement that received shareholder approval, (2) was from a 25% or greater shareholder of the company which resulted in the acquirer becoming a 25% or greater shareholder of the company, or (3) was from a 45% or greater shareholder of the company which resulted in the acquirer becoming a 45% or greater shareholder of the company. A "special" tender offer must be extended to all shareholders, but the offeror is not required to purchase more than 5% of the company's outstanding shares, regardless of how many shares are tendered by shareholders. In general, the tender offer may be consummated only if (i) at least 5% of 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.

If, as a result of an acquisition of shares, the acquirer will hold more than 90% of a company's outstanding shares, the acquisition must be made by means of a tender offer for all of the outstanding shares. In general, if less than 5% of the outstanding shares are not tendered in the tender offer and more than half of the offerees who have no personal interest in the offer tendered their shares, all the shares that the acquirer offered to purchase will be transferred to it. Shareholders may request appraisal rights in connection with a full tender offer for a period of six months following the consummation of the tender offer, but the acquirer is entitled to stipulate that tendering shareholders will forfeit such appraisal rights.

In addition, our Board of Directors may decide to adopt a shareholder rights plan without further shareholder approval.

Finally, Israeli tax law treats stock-for-stock acquisitions between an Israeli company and a foreign company less favorably than does U.S. tax law. For example, Israeli tax law subjects a shareholder who exchanges his ordinary shares for shares in another corporation to taxation on half the shareholder's shares two years following the exchange and on the balance four years thereafter even if the shareholder has not yet sold the new shares.

Modification of Class Rights

Our Articles of Association provide that the rights attached to any class (unless otherwise provided by the terms of such class), such as voting, rights to dividends and the like, may be varied by written consent of holders of seventy-five percent of the issued shares of that class, or by adoption by the holders of seventy-five percent (75%) of the shares of that class at a separate class meeting. Subject thereto, the conditions imposed by our Articles of Association governing changes in the rights of any class of shares, are no more stringent than is required by Israeli law.

Board of Directors

According to the Companies Law and our Articles of Association, the management of our business is vested in our Board of Directors. Our Articles of Association provide that the Board of Directors shall consist of not less than five and not more than nine directors as shall be determined by our shareholders (in October 2006 our shareholders fixed the maximum size of our Board of Directors at nine members). In accordance with our Articles of Association, our Board of Directors (other than our external directors) is divided into three classes with each class serving until the third annual meeting following their election, as more fully described in "Item 6– Directors, Senior Management and Employees – Board Practices – Staggered Board." There is no requirement under our Articles of Association or under Israeli law for directors to retire on attaining a specific age. Our Articles of Association do not require directors to hold our ordinary shares to qualify for election.

The Board of Directors may exercise all such powers and may take all such actions that are not specifically granted to our shareholders. As part of its powers, our Board of Directors may cause the Company to borrow or secure payment of any sum or sums of money for the purposes of the Company, at such times and upon such terms and conditions as it thinks fit, including the grants of security interests on all or any part of the property of the Company. In addition, the Companies Law requires that transactions between a company and its office holders (which term includes directors) or that benefit its office holders, including arrangements as to the compensation of office holders, be approved as provided for in the Companies Law and the company's Articles of Association, as more fully described in Item 6C under "Approval of Specified Related Party Transactions Under Israeli Law".

A resolution proposed at any meeting of the Board of Directors shall be deemed adopted if approved by a majority of the directors present and voting on the matter.

Exculpation, Insurance and Indemnification

Exculpation of Office Holders

Under the Companies Law, an Israeli company may not exempt an office holder from liability for a breach of his or her duty of loyalty, but may exempt in advance an office holder from his or her liability to the company, in whole or in part, for a breach of his duty of care (except in connection with distributions), provided that the articles of association of the company allow it to do so. Our Articles of Association allow us to exempt our office holders to the maximum extent permitted by law.

Insurance of Office Holders

As permitted by the Companies Law, our Articles of Association provide that we may enter into a contract for the insurance of the liability of any of our office holders, with respect to an act performed in the capacity of an office holder for:

- a breach of his or her duty of care to us or to another person;
- a breach of his or her duty of loyalty to us, provided that the office holder acted in good faith and had reasonable cause to assume that his or her act would not prejudice our interests;
- a financial liability imposed upon him or her in favor of another person;
- expenses he or she incurs as a result of administrative proceedings that may be instituted against him or her under Israeli securities laws, if applicable, and payments made to injured persons under specific circumstances thereunder; and
- any other matter in respect of which it is permitted or will be permitted under applicable law to insure the liability of an office holder in the Company.

Indemnification of Office Holders

As permitted by the Companies Law, our Articles of Association provide that we may indemnify any of our office holders against the following obligations and expenses imposed on the office holder with respect to an act performed in the capacity of an office holder:

- a financial liability incurred by, or imposed on him or her in favor of another person by a court judgment, including a settlement or an arbitration award approved by the court. Such indemnification may be approved (i) after the liability has been incurred or (ii) in advance, provided that our undertaking to indemnify is limited to events that our Board of Directors believes are foreseeable in light of our actual operations at the time of providing the undertaking and to a sum or criterion that our Board of Directors determines to be reasonable under the circumstances;
- reasonable litigation expenses, including attorney's fees, expended by the office holder as a result of an investigation or proceeding instituted against him or her by a competent authority, provided that such investigation or proceeding either (A) concluded without the filing of an indictment against him or her or (B) concluded with the imposition of financial liability in lieu of criminal proceedings other than with respect to a criminal offense that does not require proof of criminal intent or in connection with a financial sanction;
- reasonable litigation expenses, including attorneys' fees, expended by the office holder or charged to him or her by a court in connection with proceedings we institute against him or her or instituted on our behalf or by another person, a criminal indictment from which he or she was acquitted, or a criminal indictment in which he or she was convicted for a criminal offense that does not require proof of criminal intent;

- expenses he or she incurs as a result of administrative proceedings that may be instituted against him or her under Israeli securities laws, if applicable, and payments made to injured persons under specific circumstances thereunder; and

- any other matter in respect of which it is permitted or will be permitted under applicable law to indemnify an office holder in the Company.

Limitations on Insurance and Indemnification

The Companies Law provides that a company may not indemnify an office holder, or enter into an insurance contract which would provide coverage for any monetary liability incurred as a result of any of the following:

- A breach by the office holder of his or her duty of loyalty unless, with respect to indemnification or insurance coverage, the office holder acted in good faith and had a reasonable basis to believe that the act would not prejudice the company;

- A breach by the office holder of his or her duty of care if the breach was done intentionally or recklessly unless the breach was done negligently;

- Any act or omission done with the intent to derive an illegal personal benefit; or

- Any fine levied against the office holder.

In addition, under the Companies Law, indemnification of, and procurement of insurance coverage for, our office holders must be approved by our Audit Committee and our Board of Directors and, if the beneficiary is a director, by our shareholders.

We currently hold directors and officers liability insurance for the benefit of our office holders with an aggregate coverage limit of $25 million, including side A coverage. In addition, we provide our directors and officers indemnification pursuant to the terms of a Letter of Indemnification substantially in the form approved by our shareholders.

C. Material Contracts

See the summary of the terms of the Headquarters Lease in “Item 7B – Major Shareholders and Related Party Transactions – Related Party Transactions – Lease of Property.

D. Exchange Controls

There are currently no Israeli currency control restrictions on payments of dividends or other distributions with respect to our ordinary shares or the proceeds from the sale of the shares, except for the obligation of Israeli residents to file reports with the Bank of Israel regarding certain transactions. However, legislation remains in effect pursuant to which currency controls can be imposed by administrative action at any time.

E. Taxation

Holders of our ordinary shares should consult their own tax advisors as to the United States, Israeli or other tax consequences of the purchase, ownership and disposition of our ordinary shares, including, in particular, the effect of any foreign, state or local taxes.

Israeli Tax Considerations

The following is a summary of the material current tax structure applicable to companies incorporated in Israel and some Israeli Government programs benefiting us, with special reference to its effect on us. The following also contains a discussion of the material Israeli tax consequences to purchasers of our ordinary shares and Israeli government programs benefiting us. To the extent that the discussion is based on new tax legislation which has not been subject to judicial or administrative interpretation, we cannot assure you that the views expressed in the discussion will be accepted by the Israel tax authorities or courts. This summary does not discuss all the aspects of Israeli tax law that may be relevant to a particular investor in light of his or her personal investment circumstances or to some types of investors subject to special treatment under Israeli law. Examples of this kind of investor include traders in securities or persons that own, directly or indirectly, 10% or more of our outstanding voting capital, all of whom are subject to special tax regimes not covered in this discussion. Some parts of this discussion are based on new tax legislation which has not been subject to judicial or administrative interpretation. The discussion is not intended, and should not be construed, as legal or professional tax advice and is not exhaustive of all possible tax considerations.

General Corporate Tax Structure

Generally, Israeli companies are subject to “Corporate Tax” on their taxable income. As of 2018, the corporate tax rate is 23% (in 2016 and 2017, the corporate tax rate was 25% and 24%, respectively). However, the effective tax rate payable by a company that qualifies as an Industrial Company that derives income from an Approved Enterprise, a Beneficiary Enterprise or a Preferred Enterprise (as discussed below), like us, may be considerably less. Capital gains derived by an Israeli company are subject to the prevailing corporate tax rate.

Tax Benefits Under the Law for the Encouragement of Capital Investments, 1959

The 2005 Amendment to the Investments Law

An amendment to the Law for the Encouragement of Capital Investments 1959 (the “Investments Law”), which was published on April 1, 2005 (the “Amendment”), changed certain provisions of the Investments Law. As a result of the Amendment, a company is no longer obliged to obtain Approved Enterprise status in order to receive the tax benefits previously available under the Alternative Benefits provisions, and therefore generally there is no need to apply to the Investment Center for this purpose. Rather, the Company may claim the tax benefits offered by the Investments Law directly in its tax returns by notifying the ITA within 12 months of the end of that year, provided that its facilities meet the criteria for tax benefits set out by the Amendment. A company is also granted a right to approach the Israeli Tax Authority for a pre-ruling regarding their eligibility for benefits under the Amendment.

The Amendment applies to new investment programs and investment programs with an election year commencing after 2004, but does not apply to investment programs approved prior to April 1, 2005. The Amendment provides that terms and benefits included in any certificate of approval that was granted before the Amendment became effective (April 1, 2005) will remain subject to the provisions of the Investments Law as in effect on the date of such approval.

Tax benefits are available under the Amendment to production facilities (or other eligible facilities), which are generally required to derive more than 25% of their business income from export to specific markets with a population of at least 12 million (following an amendment which became effective as of July 2013, the export criteria was increased to markets with population of at least 14 million; such export criteria will further increase in the future by 1.4% per annum) and meet additional criteria stipulate in the amendment (referred to as a “Beneficiary Enterprise”). In order to receive the tax benefits, the Amendment states that the company must make an investment in the Beneficiary Enterprise, which meets all of the conditions, including exceeding a certain percentage or a minimum amount specified in the Investments Law. Such investment may be made over a period of no more than three years ending at the end of the year in which the company requested to have the tax benefits apply to the Beneficiary Enterprise (the “Year of Election”). Where the company requests to have the tax benefits apply to an expansion of existing facilities, then only the expansion will be considered a Beneficiary Enterprise and the company’s effective tax rate will be the result of a weighted combination of the applicable rates. In this case, the minimum investment required in order to qualify as a Beneficiary Enterprise is required to exceed a certain percentage or a minimum amount of the company’s production assets before the expansion.

The extent of the tax benefits available under the Amendment to qualifying income of a Beneficiary Enterprise depend on, among other things, the geographic location in Israel of the Beneficiary Enterprise. The geographic location of the company at the year of election will also determine the period for which tax benefits are available. Such tax benefits include an exemption from corporate tax on undistributed income for a period of between two to ten years, depending on the geographic location of the Beneficiary Enterprise in Israel, and a reduced corporate tax rate of between 10% to 25% for the remainder of the benefits period, depending on the level of foreign investment in the company in each year if it is a qualified FIC. A company qualifying for tax benefits under the Amendment which pays a dividend out of income derived by its Beneficiary Enterprise during the tax exemption period will be subject to corporate tax in respect of the gross amount of the dividend at the otherwise applicable rate of 10%-25%. Dividends paid out of income attributed to a Beneficiary Enterprise are generally subject to withholding tax at source at the rate of 20% or such lower rate as may be provided in an applicable tax treaty.

The duration of tax benefits is subject to a limitation of the earlier of 7 to 10 years from the commencement year, or 12 years from the first day of the Year of Election.

The benefits available to a Beneficiary Enterprise are subject to the fulfillment of conditions stipulated in the Investments 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, and interest, or other monetary penalties.

We elected 2009 and 2012 as “Years of Election” according to the law prior to the 2011 Amendment mentioned below.

Tax-exempt income generated under the provisions of the Investments Law, as amended, will subject us to taxes upon distribution or liquidation and we may be required to record a deferred tax liability with respect to such tax-exempt income.

Preferred Enterprise – The 2011 Amendment

On December 29, 2010, the Israeli parliament approved an amendment to the Investments Law, effective as of January 1, 2011, which constitutes a reform of the incentives regime under such law.

The amendment generally abolishes the previous tax benefit routes that were afforded under the Investments Law, specifically the tax-exemption periods previously allowed, and introduces new tax benefits for industrial enterprises meeting the criteria of the law, which include the following:

- A reduced corporate tax rate for industrial enterprises, provided that more than 25% of their annual income is derived from export, which will apply to the enterprise’s entire preferred income so that in the tax years 2011 and 2012 the reduced tax rate was 10% for preferred income derived from industrial facilities located in development area A and 15% for those located elsewhere in Israel, in the tax year 2013 the reduced tax rate was 7% for development area A and 12.5% for the rest of Israel, and for the tax years of 2014, 2015 and 2016, the reduced tax rate is 9% for development area A and 16% for the rest of Israel, and as of the tax year 2017 and onwards, the reduced tax rate is 7.5% for development area A and 16% for the rest of Israel.

- The reduced tax rates will no longer be contingent upon making a minimum qualifying investment in productive assets.

- A definition of “preferred income” was introduced into the Investments Law to include certain types of income that are generated by the Israeli production activity of a preferred enterprise.

- A reduced dividend withholding tax rate of 15% will apply to dividends paid from preferred income to both Israeli and non-Israeli investors, which tax rate was increased to 20% for dividends paid from preferred income which was accumulated from 2014 and onwards, and with an exemption from such withholding tax applying to dividends paid to an Israeli company.

A “Preferred Company” (as defined in the Investments Law) may generally elect to apply the provisions of the amendment to preferred income produced or generated by it commencing on January 1, 2011. The amendment provides various transition provisions which allow, under certain circumstances, to apply the new regime to investment programs previously approved or elected under the Investments Law in its previous form.

Under the transition provisions of the new legislation, we decided to irrevocably implement the new law, effective January 1, 2014.

A substantial portion of our taxable operating income is derived from our Preferred Enterprise programs and we expect that a substantial portion of any taxable operating income that we may realize in the future will be also derived from such programs.

In December 2016, the Economic Efficiency Law (Legislative Amendments for Applying the Economic Policy for the 2017 and 2018 Budget Years), 2016 which includes Amendment 73 to the Law ("Amendment 73") was published. According to Amendment 73, a preferred enterprise located in development area A will be subject to a tax rate of 7.5% instead of 9% effective from January 1, 2017 and thereafter (the tax rate applicable to preferred enterprises located in other areas remains at 16%).

Benefits under the new regime of “Preferred Technology Enterprise” will include:

- A reduced flat corporate tax rate of 12% (or 7.5% for entities located in Development Area A) on qualifying income deriving from eligible Intellectual Property (“Preferred Technology Income”), subject to satisfaction of a number of conditions, including compliance with a minimal amount or ratio of annual R&D expenditure and R&D employees, as well as having at least 25% of annual income derived from export.

- A 12% capital gains tax rate on the sale of a preferred intangible asset to a foreign affiliated enterprise, provided that the asset was initially purchased from a foreign resident at an amount of NIS 200 million or more.

- A withholding tax rate of 20% for dividends paid from Preferred Technology Income (with an exemption on dividends paid to an Israeli company). Such rate may be reduced to 4% on dividends paid to a foreign resident company, subject to certain conditions regarding percentage of foreign ownership of the distributing entity.

- Special technological preferred enterprise - an enterprise for which total consolidated revenues of its parent company and all subsidiaries exceed NIS 10 billion. Such enterprise will be subject to tax at a rate of 6% on profits deriving from intellectual property, regardless of the enterprise's geographical location.

Accordingly, the above changes in the tax rates relating to technological enterprises were not considered in the computation of deferred taxes as of December 31, 2016.

From time to time, the Israeli Government has discussed reducing the benefits available to companies under the Investments Law. The termination or substantial reduction of any of the benefits available under the Investments Law could materially increase our tax liabilities.

Tax Benefits under the 2017 Amendment

The 2017 Amendment was enacted as part of the Economic Efficiency Law that was published on December 29, 2016, and is effective as of January 1, 2017. The 2017 Amendment provides new tax benefits for two types of “Technology Enterprises”, as described below, and is in addition to the other existing tax beneficial programs under the Investments Law.

The 2017 Amendment provides that a technology company satisfying certain conditions will qualify as a “Preferred Technology Enterprise” and will thereby enjoy a reduced corporate tax rate of 12% on income that qualifies as “Preferred Technology Income”, as defined in the Investments Law. The tax rate is further reduced to 7.5% for a Preferred Technology Enterprise located in development Zone A. In addition, a Preferred Technology Enterprise will enjoy a reduced corporate tax rate of 12% on capital gain derived from the sale of certain “Benefitted Intangible Assets” (as defined in the Investments Law) to a related foreign company if the Benefitted Intangible Assets were acquired from a foreign company on or after January 1, 2017 for at least NIS 200 million, and the sale receives prior approval from the National Authority for Technological Innovation, or NATI.

The 2017 Amendment further provides that a technology company satisfying certain conditions will qualify as a “Special Preferred Technology Enterprise” and will thereby enjoy a reduced corporate tax rate of 6% on “Preferred Technology Income” regardless of the company’s geographic location within Israel. In addition, a Special Preferred Technology Enterprise will enjoy a reduced corporate tax rate of 6% on capital gain derived from the sale of certain “Benefitted Intangible Assets” to a related foreign company if the Benefitted Intangible Assets were either developed by an Israeli company or acquired from a foreign company on or after January 1, 2017, and the sale received prior approval from NATI. A Special Preferred Technology Enterprise that acquires Benefitted Intangible Assets from a foreign company for more than NIS 500 million will be eligible for these benefits for at least ten years, subject to certain approvals as specified in the Investments Law. Dividends distributed by a Preferred Technology Enterprise or a Special Preferred Technology Enterprise, paid out of Preferred Technology Income, are generally subject to withholding tax at source at the rate of 20% or such lower rate as may be provided in an applicable tax treaty (subject to the receipt in advance of a valid certificate from the Israel Tax Authority allowing for a reduced tax rate). However, if such dividends are paid to an Israeli company, no tax is required to be withheld. If such divided are distributed to a foreign company and other conditions are met, the withholding tax rate will be 4%.

We have examined the impact of the 2017 Amendment and the degree to which we will qualify as a Preferred Technology Enterprise and have elected to adopt it as of 2017 onwards.

Tax Benefits Under the Law for the Encouragement of Industry (Taxes), 1969

Under the Law for the Encouragement of Industry (Taxes), 1969 (the “Industry Encouragement Law”), Industrial Companies are entitled to the following preferred corporate tax benefits, among others:

- Deduction of purchases of know-how and patents over an eight-year period for tax purposes;

- Right to elect, under specified conditions, to file a consolidated tax return with additional related Israeli Industrial Companies;

- Accelerated depreciation rates on equipment and buildings; and

- Deductions over a three-year period of expenses involved with the issuance and listing of shares on a recognized stock market.

Eligibility for benefits under the Industry Encouragement Law is not subject to receipt of prior approval from any governmental authority. Under the Industry Encouragement Law, an “Industrial Company” is defined as a company resident in Israel, at least 90% of the income of which, in any tax year, exclusive of income from government loans, capital gains, interest and dividends, is derived from an “Industrial Enterprise” owned by it. An “Industrial Enterprise” is defined as an enterprise, located in Israel, owned by an Industrial Company, whose major activity in a given tax year is industrial production activity.

We believe that we currently qualify as an Industrial Company within the definition of the Industry Encouragement Law. No assurance can be given that we will continue to qualify as an Industrial Company or that the benefits described above will be available in the future.

Capital Gains Tax on Sales of Our Ordinary Shares

Israeli law generally imposes a capital gains tax on the sale of any capital assets by residents of Israel, as defined for Israeli tax purposes, and on the sale of assets located in Israel, including shares in Israeli companies, by non-residents of Israel, unless a specific exemption is available or unless a tax treaty between Israel and the shareholder’s country of residence provides otherwise. The law distinguishes between real gain and inflationary surplus. The inflationary surplus is a portion of the total capital gain which is equivalent to the increase of the relevant asset’s purchase price which is attributable to the increase in the Israeli consumer price index or, in certain circumstances, a foreign currency exchange rate, between the date of purchase and the date of sale. The real gain is the excess of the total capital gain over the inflationary surplus.

Generally, as of January 1, 2012, the tax rate applicable to capital gains derived from the sale of shares, whether listed on a stock market or not, is 25% for Israeli individuals, unless such shareholder claims a deduction for financing expenses in connection with such shares, in which case the gain will generally be taxed at a rate of 30%. Additionally, if such shareholder is considered a “significant shareholder” at any time during the 12-month period preceding such sale, i.e., such shareholder holds directly or indirectly, including with others, at least 10% of any means of control in the company, the tax rate shall be 30%. However, the foregoing tax rates do not apply to: (i) dealers in securities; and (ii) shareholders who acquired their shares prior to an initial public offering (that may be subject to a different tax arrangement). Israeli companies are subject to the Corporate Tax rate on capital gains derived from the sale of listed shares.

As of January 1, 2013, shareholders that are individuals who have taxable income that exceeds NIS 800,000 (linked to the Israeli CPI each year) in a tax year, will be subject to an additional tax, referred to as High Income Tax, at the rate of 2% on their taxable income for such tax year which is in excess of such threshold. For this purpose taxable income will include taxable capital gains from the sale of our shares and taxable income from dividend distributions. For this purpose, taxable income includes taxable capital gains from the sale of our shares and taxable income from dividend distributions. Under an amendment to the Israeli Tax Ordinance enacted in December 2016, the rate of High Income Tax for 2017 and thereafter will increase to 3% and will be applicable to annual income exceeding NIS 640,000 (linked to the Israeli CPI each year, which equated to NIS 614,880 in 2018).

The tax basis of our ordinary shares acquired prior to January 1, 2003 will generally be determined in accordance with the average closing share price in the three trading days preceding January 1, 2003. However, a request may be made to the tax authorities to consider the actual adjusted cost of the shares as the tax basis if it is higher than such average price.

Non-Israeli residents are generally exempt from Israeli capital gains tax on any gains derived from the sale of shares of Israeli companies publicly traded on a recognized stock exchange or regulated market outside of Israel, provided however that such capital gains are not derived from a permanent establishment in Israel and such shareholders did not acquire their shares prior to an 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 or are entitled to 25% or more of the revenues or profits of such non-Israeli corporation, whether directly or indirectly.

In some instances where our shareholders may be liable to Israeli tax on the sale of their ordinary shares, the payment of the consideration may be subject to the withholding of Israeli tax at the source.

Pursuant to the Convention Between the government of the United States of America and the government of Israel with Respect to Taxes on Income, as amended (the "U.S.-Israel Tax Treaty"), the sale, exchange or disposition of ordinary shares by a person who (i) holds the ordinary shares as a capital asset, (ii) qualifies as a resident of the United States within the meaning of the U.S.-Israel Tax Treaty and (iii) is entitled to claim the benefits afforded to such person by the U.S.-Israel Tax Treaty, generally, will not be subject to the Israeli capital gains tax. Such exemption will not apply if (i) such Treaty U.S. Resident holds, directly or indirectly, shares representing 10% or more of our voting power during any part of the 12-month period preceding such sale, exchange or disposition, subject to certain conditions, or (ii) the capital gains from such sale, exchange or disposition can be allocated to a permanent establishment in Israel. In such case, the sale, exchange or disposition of ordinary shares would be subject to Israeli tax, to the extent applicable; however, under the U.S.-Israel Tax Treaty, such Treaty U.S. Resident would be permitted to claim a credit for such taxes against the U.S. federal income tax imposed with respect to such sale, exchange or disposition, subject to the limitations in U.S. laws applicable to foreign tax credits. The U.S.-Israel Tax Treaty does not relate to U.S. state or local taxes.

Taxation of Dividends paid to Non-Israeli Resident Holders of Shares

Non-residents of Israel are subject to income tax on income accrued or derived from sources in Israel. Such sources of income include passive income such as dividends. On distributions of dividends other than bonus shares, or stock dividends, income tax is applicable at the rate of 25%, or 30% for a shareholder that is considered a “significant shareholder” at any time during the 12-month period preceding such distribution, unless a different rate is provided in a treaty between Israel and the shareholder’s country of residence. A “substantial shareholder” is generally a person who alone or together with such person’s relative or another person who collaborates with such person on a permanent 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 executive officer, receive assets upon liquidation, or order someone who holds any of the aforesaid rights how to act, regardless of the source of such right.

However, a distribution of dividends to non-Israeli residents is subject to withholding tax at source at a rate of 15% if the dividend is distributed from income attributed to an Approved Enterprise, a Beneficiary Enterprise or a Privileged Enterprise, unless a reduced tax rate is provided under an applicable tax treaty. Pursuant to the Tax Amendment, effective January 1, 2014, if the dividend is being paid out of certain income attributable to a Preferred Enterprise, the dividend will be subject to tax at the rate of 20% (and not 15%). A different rate may be provided in a treaty between Israel and the shareholder’s country of residence, as mentioned below.

Under the U.S.-Israel Tax Treaty, the maximum tax on dividends paid to a holder of ordinary shares who is a Treaty U.S. Resident is 25%. However, if the income out of which the dividend is paid is not generated by an Approved Enterprise, Beneficiary Enterprise or Preferred Enterprise, and not more than 25% of our gross income consists of interest or dividends, dividends paid to a U.S. corporation holding at least 10% of our issued voting power during the part of the tax year which precedes the date of payment of the dividend and during the whole of its prior tax year, are generally taxed at a rate of 12.5%. Dividends generated by an Approved Enterprise, Beneficiary Enterprise or Preferred Enterprise, are taxed at the rate of 15% under the U.S.-Israel Tax Treaty.

United States Federal Income Tax Considerations

Subject to the limitations described herein, the following discussion summarizes certain United States federal income tax consequences to a U.S. Holder of our ordinary shares. A “U.S. Holder” means a holder of our ordinary shares who is:

- An individual citizen or resident of the United States for U.S. federal income tax purposes;

- A corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized in the United States or under the laws of the United States or any political subdivision thereof or the District of Columbia;

- An estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- A trust (i) if, in general a court within the United States is able to exercise primary supervision over its administration and one or more U.S. persons have the authority to control all of its substantial decisions, or (ii) that has in effect a valid election under applicable U.S. Treasury Regulations to be treated as a U.S. person.

This discussion considers only U.S. Holders that will own their ordinary shares as capital assets (generally, for investment) and does not purport to be a comprehensive description of all of the tax considerations that may be relevant to each person's decision to purchase our ordinary shares. Certain aspects of U.S. federal income taxation relevant to a holder of our ordinary shares that is not a U.S. Holder and not a partnership or other pass-through entity (a "Non-U.S. Holder") are also discussed below.

This discussion is based on current provisions of the Code, current and proposed Treasury Regulations promulgated thereunder, and administrative and judicial decisions as of the date hereof, all of which are subject to change, possibly on a retroactive basis. This discussion does not address all aspects of U.S. federal income taxation that may be relevant to any particular U.S. Holder in light of such holder's individual circumstances. In particular, this discussion does not address the potential application of the alternative minimum tax or U.S. federal income tax consequences to U.S. Holders that are subject to special treatment, including U.S. Holders that:

- Are broker-dealers or insurance companies;
- Dealers or traders in securities, commodities or currencies;
- Have elected mark-to-market accounting method;
- Are tax-exempt organizations or retirement plans;
- Are grantor trusts;
- Partnerships or other pass-through entities;
- Partners or other equity owners in partnerships or other pass-through entities;
- U.S. Holders selling our ordinary shares short,
- U.S. Holders deemed to have sold our ordinary shares in a "constructive sale,"
- Are S corporations;
- Are financial institutions or "financial services entities" ;
- Hold their ordinary shares as part of a straddle, "hedge", "integrated" or "conversion transaction" with other investments;

· Are certain former citizens or long-term residents of the United States;

· Acquired their ordinary shares upon the exercise of employee stock options or otherwise as compensation;

· Are real estate investment trusts or regulated investment companies;

· Pension funds;

· Own directly, indirectly or by attribution at least 10% of our shares by vote or value; or

· Have a functional currency that is not the U.S. dollar.

If an entity treated as a partnership for U.S. federal income tax purposes holds our ordinary shares, the tax treatment of the entity and an equity owner in such entity will generally depend on the status of the equity owner and the activities of the entity. Such an equity owner or entity should consult its own tax advisor as to its tax consequences.

In addition, this discussion does not address any aspect of state, local or non-United States tax laws or the possible application of United States federal gift or estate taxes.

Each holder of our ordinary shares is advised to consult such holder's own tax advisor with respect to the specific tax consequences to such holder of purchasing, holding or disposing of our ordinary shares, including the applicability and effect of federal, state, local and foreign laws and possible changes in the tax laws in such holder's particular circumstances.

Taxation of Ordinary Shares

Taxation of Dividends Paid On Ordinary Shares. Subject to the discussion below under "Passive Foreign Investment Company Status", a U.S. Holder will be required to include in gross income as dividend income the amount of any distribution paid on our ordinary shares, including any non-U.S. taxes withheld from the amount paid, to the extent the distribution is paid out of our current or accumulated earnings and profits as determined for U.S. federal income tax purposes. Distributions in excess of such earnings and profits will be applied against and will reduce the U.S. Holder's basis in our ordinary shares and, to the extent in excess of such basis, will be treated as gain from the deemed sale or exchange of our ordinary shares. The dividend portion of such distributions generally will not qualify for the dividends received deduction available to corporations and thus will be subject to tax at the rate applicable to their taxable income.

Dividends that are received by non-corporate U.S. Holders will generally be taxed at the rate applicable to long-term capital gains (currently a maximum rate of 20%), provided that such dividends meet the requirements of “qualified dividend income.” Such income may also be subject to a 3.8% Net Investment Income Tax (NIIT) on individuals, estates or trusts. Dividends that fail to meet such requirements, and dividends received by corporate U.S. Holders, are taxed at ordinary income rates. No dividend received by a U.S. Holder will be a qualified dividend (1) if the U.S. Holder held the ordinary share with respect to which the dividend was paid for less than 61 days during the 121-day period beginning on the date that is 60 days before the ex-dividend date with respect to such dividend, excluding for this purpose, under the rules of Code Section 246(c), any period during which the U.S. Holder has an option to sell, is under a contractual obligation to sell, has made and not closed a short sale of, is the grantor of a deep-in-the-money or otherwise nonqualified option to buy, or has otherwise diminished its risk of loss by holding other positions with respect to, such ordinary share (or substantially identical securities); or (2) to the extent that the U.S. Holder is under an obligation (pursuant to a short sale or otherwise) to make related payments with respect to positions in property substantially similar or related to the ordinary share with respect to which the dividend is paid. If we were to be a PFIC (as such term is defined in the Code) for any year, dividends paid on our ordinary shares in such year or in the following year would not be qualified dividends. In addition, a non-corporate U.S. Holder will be able to take a qualified dividend into account in determining its deductible investment interest (which is generally limited to its net investment income) only if it elects to do so; in such case the dividend will be taxed at ordinary income rates.

Distributions of current or accumulated earnings and profits paid in foreign currency to a U.S. Holder (including any non-U.S. taxes withheld therefrom) will generally be includible in the income of a U.S. Holder in a U.S. dollar amount calculated by reference to the exchange rate on the day the distribution is received regardless of whether the foreign currency is converted into U.S. dollars. A U.S. Holder that receives a foreign currency distribution and converts the foreign currency into U.S. dollars after the date of receipt may have foreign exchange gain or loss based on any appreciation or depreciation in the value of the foreign currency against the U.S. dollar, which will generally be U.S. source ordinary income or loss.

U.S. Holders may have the option of claiming the amount of any non-U.S. income taxes withheld on a dividend distribution either as a deduction from gross income provided a deduction is claimed for all of the foreign income taxes the U.S. Holder pays or accrues in the particular year or as a dollar-for-dollar credit against their U.S. federal income tax liability. Individuals who do not claim itemized deductions, but instead utilize the standard deduction, may not claim a deduction for the amount of the non-U.S. income taxes withheld, but such amount may be claimed as a credit against the individual’s U.S. federal income tax liability. A deduction does not reduce U.S. tax on a dollar-for-dollar basis like a tax credit. The deduction, however, is not subject to the limitations applicable to foreign tax credits, but may be subject to other limitations and each U.S. Holder is urged to consult its own tax advisor. The amount of non-U.S. income taxes which may be claimed as a credit in any year is subject to complex limitations and restrictions, which must be determined on an individual basis by each U.S. Holder. These limitations include, among others, rules which limit foreign tax credits allowable with respect to specific classes of income to the U.S. federal income taxes otherwise payable with respect to each such class of income. The total amount of allowable foreign tax credits in any year generally cannot exceed the pre-credit U.S. tax liability for the year attributed to non-U.S. source taxable income. A U.S. Holder will be denied a foreign tax credit with respect to non-U.S. income tax withheld from a dividend received on the ordinary shares if such U.S. Holder has not held the ordinary shares for at least 16 days of the 31-day period beginning on the date which is 15 days before the ex-dividend date with respect to such dividend, or to the extent such U.S. Holder is under an obligation to make related payments with respect to positions in substantially similar or related property. Any days during which a U.S. Holder has substantially diminished its risk of loss on the ordinary shares are not counted toward meeting the required 16-day holding period. Distributions of current or accumulated earnings and profits generally will be foreign source passive income for U.S. foreign tax credit purposes.

Taxation of the Disposition of Ordinary Shares. Subject to the discussion below under “Passive Foreign Investment Company Status,” upon the sale, exchange or other disposition of our ordinary shares (other than with respect to certain non-recognition transactions), a U.S. Holder will recognize capital gain or loss in an amount equal to the difference between such U.S. Holder’s basis in such ordinary shares, which is usually the cost of such shares, and the amount realized on the disposition. A U.S. Holder that uses the cash method of accounting calculates the U.S. dollar value of the proceeds received on the sale as of the date that the sale settles, while a U.S. Holder that uses the accrual method of accounting is required to calculate the value of the proceeds of the sale as of the “trade date,” unless such U.S. Holder has elected to use the settlement date to determine its proceeds of sale. Capital gain from the sale, exchange or other disposition of our ordinary shares held more than one year is long-term capital gain, and may be eligible for a reduced rate of taxation for individuals, estates or trusts (currently taxable at a maximum of 20%). U.S. Holders should consult their own tax advisors regarding the availability of the reduced rate of U.S. federal income tax on dividends in light of their own particular circumstances. Gains or losses recognized by a U.S. Holder on a sale, exchange or other disposition of our ordinary shares generally will be treated as U.S. source income for U.S. foreign tax credit purposes. The deductibility of a capital loss recognized on the sale, exchange or other disposition of our ordinary shares may be subject to limitations. A U.S. Holder that receives foreign currency upon disposition of our ordinary shares and subsequently converts the foreign currency into U.S. dollars or disposes of such foreign currency, may have foreign exchange gain or loss based on any appreciation or depreciation in the value of the foreign currency against the U.S. dollar, which will generally be U.S. source ordinary income or loss.

Net Investment Income. Certain non-corporate U.S. holders may be subject to an additional 3.8% surtax on all or a portion of their “net investment income,” which may include dividends on, or capital gains recognized from the disposition of, our ordinary shares subject to certain limitations and exceptions. U.S. holders are urged to consult their own tax advisors regarding the implications of the additional net investment income on their investment in our ordinary shares.

Passive Foreign Investment Company Status. We will be a PFIC if (taking into account certain “look-through” rules with respect to the income and assets of our subsidiaries) either (i) 75 percent or more of our gross income in a taxable year is passive income or (ii) the average percentage of our total assets (by value, determined on a quarterly basis) which produce, or are held for the production of, passive income during the taxable year is at least 50 percent. Passive income for this purpose generally includes dividends, interest, royalties, rents, gains from commodities and securities transactions. If we were a PFIC, each U.S. Holder would (unless it made one of the elections discussed below on a timely basis) be taxed on gain recognized from the disposition of our ordinary shares (including gain deemed recognized if the ordinary shares are used as security for a loan) and upon receipt of certain excess distributions with respect to our ordinary shares as if such income had been recognized ratably over the U.S. Holder’s holding period for the ordinary shares. The U.S. Holder’s income for the current taxable year would include (as ordinary income) amounts allocated to the current year and to any period prior to the first day of the first taxable year for which we were a PFIC. Tax would also be computed at the highest ordinary income tax rate in effect for each other period to which income is allocated, and an interest charge on the tax as so computed would also apply. The tax liability with respect to the amount allocated to the taxable year prior to the taxable year of the distribution or disposition cannot be offset by any net operating losses. Additionally, if we were a PFIC, U.S. Holders who acquire our ordinary shares from decedents (other than certain nonresident aliens) would be denied the normally-available step-up in basis for such shares to fair market value on the date of death and, instead, would generally have a tax basis in such shares equal to the lower of the decedent’s basis or the fair market value of such shares on the date of the decedent’s death. Further, if we are a PFIC, each U.S. Holder generally will be required to file an annual report with the IRS. If we are classified as a PFIC in any year with respect to which a U.S. Holder owns our ordinary shares, we will continue to be treated as a PFIC with respect to such U.S. Holder in all succeeding years during which the U.S. Holder owns our ordinary shares, regardless of whether we continue to meet the tests described above unless such U.S. Holder elects to apply the QEF or the mark-to-market election (described below) and certain conditions are met.

As an alternative to the tax treatment described above, a U.S. Holder could elect to treat us as a “qualified electing fund” (“QEF”), in which case the U.S. Holder would be required to include in income, for each taxable year that we are a PFIC, its pro rata share of our ordinary earnings as ordinary income and its pro rata share of our net capital gain as capital gain, subject to a separate election to defer payment of taxes, which deferral is subject to an interest charge. Any income inclusion will be required whether or not such U.S. Holder owns our ordinary shares for an entire taxable year or at the end of our taxable year. The amount so includable will be determined without regard to our prior year losses or the amount of cash distributions, if any, received from us. Special rules apply if a U.S. Holder makes a QEF election after the first year in its holding period in which we are a PFIC. We will supply U.S. Holders with the information needed to report income and gain under a QEF election if we are a PFIC. A U.S. Holder’s basis in its ordinary shares will increase by any amount included in income and decrease by any amounts not included in income when distributed because such amounts were previously taxed under the QEF rules. So long as a U.S. Holder’s QEF election is in effect beginning with the first taxable year in which we were a PFIC during the U.S. Holder’s holding period for its ordinary shares, any gain or loss realized by such holder on the disposition of its ordinary shares held as a capital asset ordinarily would be a capital gain or loss. Such capital gain or loss ordinarily would be long-term if such U.S. Holder had held such ordinary shares for more than one year at the time of the disposition and would be eligible for a reduced rate of taxation for certain non-corporate U.S. holders. The QEF election is made on a shareholder-by-shareholder basis, applies to all ordinary shares held or subsequently acquired by an electing U.S. Holder and can be revoked only with the consent of the IRS.

As an alternative to making a QEF election, a U.S. Holder of PFIC stock which is “marketable stock” (e.g., “regularly traded” on the Nasdaq Global Select Market) may in certain circumstances avoid certain of the tax consequences generally applicable to holders of stock in a PFIC by electing to mark the stock to market as of the beginning of such U.S. Holder’s holding period for the ordinary shares. As a result of such election, in any taxable year that we are a PFIC, a U.S. Holder would generally be required to report gain or loss to the extent of the difference between the fair market value of the ordinary shares at the end of the taxable year and such U.S. Holder’s tax basis in its ordinary shares at that time. Any gain under this computation, and any gain on an actual disposition of the ordinary shares in a taxable year in which we are a PFIC, would be treated as ordinary income. Any loss under this computation, and any loss on an actual disposition of the ordinary shares in a taxable year in which we are a PFIC, generally would be treated as ordinary loss to the extent of the cumulative net-mark-to-market gain previously included. Any remaining loss from marking ordinary shares to market will not be allowed, and any remaining loss from an actual disposition of ordinary shares generally would be capital loss. A U.S. Holder’s tax basis in its ordinary shares is adjusted annually for any gain or loss recognized under the mark-to-market election. There can be no assurances that there will be sufficient trading volume with respect to our ordinary shares for the ordinary shares to be considered “regularly traded” or that our ordinary shares will continue to trade on the Nasdaq Global Select Market. Accordingly, there are no assurances that the ordinary shares will be marketable stock for these purposes. As with a QEF election, a mark-to-market election is made on a shareholder-by-shareholder basis, applies to all ordinary shares held or subsequently acquired by an electing U.S. Holder and can only be revoked with consent of the IRS (except to the extent the ordinary shares no longer constitute “marketable stock”).

As indicated above, we will be a PFIC for any taxable year if the average percentage (by fair market value determined on a quarterly basis) of our assets held for the production of, or that produce, passive income is at least 50 percent. The Code does not specify how a corporation must determine the fair market value of its assets for this purpose and the issue has not been definitively determined by the IRS or the courts. The market capitalization approach has generally been used to determine the fair market value of the assets of a publicly traded corporation. The IRS and the courts, however, have accepted other valuation methods besides the market capitalization approach in certain other valuation contexts. For our 2018 taxable year, we believe that we should not be classified as a PFIC. However, there can be no assurance that the IRS will not challenge this treatment and it is possible that the IRS could attempt to treat us as a PFIC for 2018 and possibly prior taxable years. The tests for determining PFIC status are applied annually and it is difficult to make accurate predictions of our future income, assets and market capitalization, including the future price of our ordinary shares, which are all relevant to this determination of whether we are classified as a PFIC. Accordingly, there can be no assurance that we will not become a PFIC in future taxable years.

U.S. Holders are urged to consult their tax advisors about the PFIC rules, including eligibility for and the manner and advisability of making, the QEF election or the mark-to market election.

Tax Consequences for Non-U.S. Holders of Ordinary Shares

Except as described in "Information Reporting and Backup Withholding" below, a Non-U.S. Holder of ordinary shares will not be subject to U.S. federal income or withholding tax on the payment of dividends on, and the proceeds from the disposition of, ordinary shares, unless, in the case of U.S. federal income taxes:

- such item is effectively connected with the conduct by the Non-U.S. Holder of a trade or business in the United States and, in the case of a resident of a country which has a treaty with the United States, such item is attributable to a permanent establishment or, in the case of an individual, a fixed place of business, in the United States; or

- the Non-U.S. Holder is an individual who holds the ordinary shares as a capital asset and is present in the United States for 183 days or more in the taxable year of the disposition and certain other requirements are met.

Information Reporting and Backup Withholding

U.S. Holders (other than certain exempt recipients, such as corporations) generally are subject to information reporting requirements with respect to dividends paid in the United States on ordinary shares and proceeds received from the sale, exchange, redemption or other disposition of ordinary shares. Under the Code, a U.S. Holder may be subject, under certain circumstances, to backup withholding with respect to dividends paid on our ordinary shares and proceeds received from the sale, exchange, redemption or other disposition of ordinary shares unless such holder provides proof of an applicable exemption or correct taxpayer identification number and otherwise complies with applicable requirements of the backup withholding rules.

Any U.S. Holders required to establish their exempt status generally must provide a properly executed IRS Form W-9 (Request for Taxpayer Identification Number and Certification).

A U.S. Holder of ordinary shares who provides an incorrect taxpayer identification number may be subject to penalties imposed by the IRS. Amounts withheld under the backup withholding rules are not an additional tax and may be refunded or credited against the U.S. Holders U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Non-U.S. Holders generally are not subject to information reporting or backup withholding with respect to dividends paid on, or the proceeds from the disposition of, ordinary shares, provided that such Non-U.S. Holder provides a taxpayer identification number, certifies to its foreign status, or otherwise establishes an exemption.

Certain U.S. holders (and to the extent provided in IRS guidance, certain non-U.S. holders) who hold interests in “specified foreign financial assets” (as defined in Section 6038D of the Code) are generally required to file an IRS Form 8938 as part of their U.S. federal income tax returns to report their ownership of such specified foreign financial assets, which may include our ordinary shares, if the total value of those assets exceed certain thresholds. Substantial penalties may apply to any failure to timely file IRS Form 8938. In addition, in the event a holder that is required to file IRS Form 8938 does not file such form, the statute of limitations on the assessment and collection of U.S. federal income taxes of such holder for the related tax year may not close until three years after the date that the required information is filed. Holders should consult their own tax advisors regarding their tax reporting obligations.

F. Dividends and Paying Agents

Not applicable.

G. Statement by Experts

Not applicable.

H. Documents on Display

We are subject to the informational requirements of the Exchange Act, asapplicable to “foreign private issuers” (as defined in Rule 3b-4 under the Exchange Act), and fulfill the obligations with respect to such requirements by filing reports and other information with the SEC.

As a foreign private issuer, we are 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 “short-swing” profit recovery provisions contained in Section 16 of the Exchange Act. In addition, we are not required under the Exchange Act to file periodic reports and financial statements with the SEC as frequently or as promptly as U.S. companies whose securities are registered under the Exchange Act.

Notwithstanding the foregoing, we furnish reports with the SEC on Form 6-K containing unaudited financial information for the first three quarters of each fiscal year and we solicit proxies and furnish proxy statements for all meetings of shareholders, a copy of which proxy statement is furnished promptly thereafter with the SEC under the cover of a Current Report on Form 6-K. This annual report and the exhibits thereto and any other document we file pursuant to the Exchange Act are available on the SEC Internet site (http://www.sec.gov) and on our website www.radware.com. However, the content of our website is not incorporated by reference into this annual report.

The documents concerning our Company which are referred to in this annual report may also be inspected at our offices located at 22 Raoul Wallenberg Street, Tel Aviv 6971917, Israel.

I. Subsidiary Information

Not applicable.

ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risk, including fluctuations in interest rates and foreign currency exchange rates. Our primary market risk exposure occurs because we generate a portion of our revenues in foreign currencies, mainly in Chinese Yuan, but also in Australian Dollar and Euro and incur a portion of our expenses in foreign currencies, mainly in NIS, but also in Euro and other foreign currencies. We generally do not engage in hedging or other transactions intended to manage risks relating to foreign currency exchange rate or interest rate fluctuations.

In addition, as of December 31, 2018, we had cash and cash equivalents, including short-term and long-term bank deposits and short-term and long-term marketable securities, of $401.1 million. As of that date, approximately 97% of our cash, cash equivalents and marketable securities are held by Radware Ltd. in Israeli or U.S. financial institutions.

The majority of our cash and cash equivalents, and short-term and long-term bank deposits are invested in banks in Israel and, to a smaller extent, in banks in the United States. The Israeli bank deposits are not insured, while the deposits made in the United States are in excess of insured limits and are not otherwise insured. If one or more of these financial institutions were to become insolvent, the loss of these investments would have a material adverse effect on our financial condition.

Exposure to Interest Rate Fluctuations

We do not invest in, or otherwise hold, for trading or other purposes, any financial instruments subject to market risk, with the exception of the following:

Approximately 25% of our cash throughout the world is invested in fixed-income securities and is affected by changes in interest rates. Interest rates are highly sensitive to many factors, including governmental monetary policies and domestic and international economic and political conditions. These securities are readily available for sale and are treated as such in our financial statements.

A decline in market interest rates, such as the significant global decline in 2008 and 2009, that continued through 2016, has had an adverse effect on our investment income. This is because, in a declining interest rate environment, borrowers may seek to refinance their borrowings at lower rates and, accordingly, prepay or redeem securities held earlier than initially expected. This action may cause us to reinvest the redeemed proceeds in lower yielding investments. An increase in market interest rates could also have an adverse effect on the value of our investment portfolio, for example, by decreasing the fair values of the fixed income securities that comprise a substantial majority of our investment portfolio.

Our investments consist primarily of government and corporate debentures and bank deposits. As of December 31, 2018, approximately 16% of our portfolio was invested in foreign banks and government debentures, 10% in other corporate debentures and the rest of the funds were invested in bank deposits and money market funds. Although we believe that we generally adhere to conservative investment guidelines, the continuing turmoil in the financial markets may result in impairments of the carrying value of our investment assets. Realized losses in our investments portfolio may adversely affect our financial position and results.

Any significant decline in our investment income or the value of our investments as a result of falling interest rates, deterioration in the credit of the securities in which we have invested, or general market conditions, could have an adverse effect on our results of operations and financial condition.

We currently have no debt.

Exposure to Currency Fluctuations

Approximately 88% of our sales in 2018 were denominated in dollars or are dollar-linked and we incur most of our expenses in dollars, NIS, and Euros. We believe that the dollar is the primary currency of the economic environment in which we operate. Thus, our functional and reporting currency is the dollar and monetary accounts maintained in currencies other than the dollar are re-measured into U.S. dollars in accordance with ASC No. 830 “Foreign Currency Matters”. Changes in currency exchange rates between our functional currency and the currency in which a transaction is denominated are included in our results of operations as financial income (expense) in the period in which the currency exchange rates change.

Our revenues and expenses may be affected by fluctuations in the value of the dollar as it relates to foreign currencies, mainly the NIS, Euro, Chinese Yuan and Australia Dollar. For example, if there were no changes in the average exchange rates of the dollar relative to the NIS, Euro, Chinese Yuan and Australia Dollar during the year in 2018 compared to the average exchange rates in 2017, our revenues would have been lower in an amount of $0.2 million and our expenses would have been lower in an amount of $0.5 million. Assuming our revenues and expenses in 2019 remain at the same level and with the same currency mix as in 2018, a 10% weakening in the value of the dollar relative to all currencies in which we operate would result in an increase in revenues of $2.7 million and an increase in our expenses of $11.2 million.

The following table presents information about the changes in the exchange rates of the U.S. dollar relative to the NIS, Euro, Chinese Yuan and Australian Dollar:

Year ended December 31,	U.S. dollar against:			
	NIS	Euro	Chinese Yuan	Australian Dollar
2014	12 %	13.4 %	3.0 %	9.1 %
2015	0.3 %	11.6 %	5.2 %	12.2 %
2016	(1.5)%	3.5 %	6.2 %	1.2 %
2017	(9.8)%	(12.2)%	6.7 %	(7.5)%
2018	8.1 %	4.6 %	5.6 %	10.7 %

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

ITEMS 12A, 12B AND 12C

Not applicable.

ITEM 12D

The Company does not have any outstanding American Depositary Shares or American Depositary Receipts.

PART II

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

Not applicable.

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

ITEMS 14A, 14B, 14C, 14D AND 14E

Not applicable.

ITEM 14E

The effective date of the registration statement (Commission File Number 333-10752) for our initial public offering of our ordinary shares was September 29, 1999. The offering commenced on October 5, 1999, and terminated after the sale of all the securities registered. The managing underwriter of the offering was Salomon Smith Barney. We registered 8,050,000 ordinary shares in the offering, including shares issued pursuant to the exercise of the underwriters' over-allotment option. Of such shares, we sold 7,000,000 ordinary shares at an aggregate offering price of $63.0 million ($9.00 per share) and certain selling shareholders sold an aggregate of 1,050,000 ordinary shares at an aggregate offering price of $9.45 million ($9.00 per share). Under the terms of the offering, we incurred underwriting discounts of $4.41 million. We also incurred estimated expenses of $1.82 million in connection with the offering. None of the expenses consisted of amounts paid directly or indirectly to any of our directors, officers, general partners or their associates, any persons owning ten percent or more of any class of our equity securities, or any of our affiliates. The net proceeds that we received as a result of the offering were approximately $56.8 million. None of the use of proceeds consisted of amounts paid directly or indirectly to any of our directors, officers, general partners or their associates, any persons owning ten percent or more of any class of our equity securities, or any of our affiliates.

In January 2000, we raised net proceeds of approximately $60.0 million in a public offering of our ordinary shares.

The net proceeds of the two offerings are kept in short-term and long-term bank deposits and in marketable securities.

ITEM 15. CONTROLS AND PROCEDURES

- Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), as of December 31, 2018. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2018, our disclosure controls and procedures were effective to ensure that: (1) information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms; and (2) such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

· Management's Annual Report on Internal Control Over Financial Reporting and Attestation Report of Registered Public Accounting Firm

Our management, under the supervision of our Chief Executive Officer and Chief Financial Officer, is responsible for establishing and maintaining adequate internal control over financial reporting for us. Our internal control over financial reporting is a process to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. Our internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets, and

- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors, and provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

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

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, assessed the effectiveness of our internal control over financial reporting as of December 31, 2018. In conducting its assessment of internal control over financial reporting, our management based its evaluation on the framework in "Internal Control – Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Our management has concluded based on its assessment, that our internal control over financial reporting was effective as of December 31, 2018 based on these criteria.

The effectiveness of our internal control over financial reporting as of December 31, 2018, has been audited by Kost, Forer, Gabbay & Kasierer (A Member of Ernst & Young Global), an independent registered public accounting firm who audited and reported on the consolidated financial statements of the company for the year ended December 31, 2018.

· Attestation Report of the Registered Public Accounting Firm

This annual report includes an attestation report of our independent registered public accounting firm regarding internal control over financial reporting on page F-3 of our audited consolidated financial statements set forth in "Item 18 – Financial Statements", and incorporated herein by reference.

· Changes in Internal Control Over Financial Reporting

During the year ended December 31, 2018, no changes in our internal control over financial reporting have occurred that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

Our Board of Directors has determined that Mr. Avraham Asheri, a member of our Audit Committee, is a financial expert as defined in the applicable regulations, and has determined that such member is "independent" as such term is defined in the Nasdaq listing standards. The education and experience of the Audit Committee financial expert is presented in "Item 6 – Directors, Senior Management and Employees – Directors and Senior Management" and is incorporated herein by reference.

ITEM 16B. CODE OF ETHICS

We have adopted a Code of Conduct and Ethics which applies to all directors, officers and employees of the Company, including our President and Chief Executive Officer, Chief Financial Officer, Director of Finance and Corporate Controller. Our Code of Conduct and Ethics has been posted on our Internet website, http://www.radware.com/corporategovernance/.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Fees Paid to Independent Public Accountants

In the annual meeting held in September 2018, our shareholders approved the reappointment of Kost, Forer, Gabbay & Kasierer, a member of Ernst & Young Global ("Ernst & Young"), to serve as our independent auditors until the next annual meeting.

The following table sets forth, for each of the years indicated, the aggregate fees billed by Ernst & Young and the percentage of each of the fees out of the total amount paid to them classified by category:

	Year Ended December 31,			
	2017		2018	
	(US$ in thousands)			
Audit and Audit Related Fees (1)	341	54 %	335	55 %
Tax Fees (2)	165	26 %	119	20 %
All Other Fees (3)	124	20 %	154	25 %
Total	630	100%	608	100%

(1) Audit Fees include fees associated with the annual audit, including the audit of internal control over financial reporting, the reviews of the Company's quarterly financial statements, statutory audits required internationally, special implementation projects of new revenue standard 606 and Lease ASC 842, consents and assistance with and review of documents filed with the SEC.

(2) Tax Fees included tax compliance, including the preparation of tax returns, tax planning and tax advice, including assistance with tax audits and appeals, advice related to acquisitions, transfer pricing and assistance with respect to requests for rulings from tax authorities.

(3) Other Fees include fees for consultation with Company management about accounting or disclosure treatment of transactions or events and consulting services such as obtaining grants from the Government of Israel for approved research and development projects.

Audit Committee's pre-approval policies and procedures

Our Audit Committee oversees our independent auditors. See also the description in "Item 6C- Directors, Senior Management and Employee - Board Practices."

Our Audit Committee has adopted a policy requiring management to obtain the Committee's approval before engaging our independent auditors to provide any other audit or permitted non-audit services to us or our subsidiaries. Pursuant to this policy, which is designed to assure you that such engagements do not impair the independence of our auditors, and which is discussed and approved at the end of each calendar year, the Audit Committee pre-approves annually a catalog of specific audit and non-audit services in the categories Audit Service, Audit-Related Service and Tax Consulting Services that may be performed by our auditors. In addition, the Audit Committee limited the aggregate amount in fees our auditors may receive during fiscal year for non-audit services in certain categories, unless pre-approved. Our Director of Finance reviews all individual management requests to engage our independent auditors as a service provider in accordance with this catalog and, if the requested services are permitted pursuant to the catalog, approve the request accordingly. We inform the Audit Committee about these approvals on a quarterly basis. Services that are not included in the catalog require pre-approval by the Audit Committee on a case-by-case basis. Our Audit Committee is not permitted to approve any engagement of our auditors if the services to be performed either fall into a category of services that are not permitted by applicable law or the services would be inconsistent with maintaining the auditors' independence.

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

None.

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

During 2018, we repurchased our ordinary shares under a share repurchase plan, in an aggregate amount of $4.3 million, as follows:

Period	(a) Total Number of Shares (or Units) Purchased	(b) Average Price Paid per Share (or Units) (in US$)	(c) Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs (1)(2)	(d) Maximum Number (or Approximate Dollar Value) of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs (1)(2)	
January 1 through 31	0	N/A	0	$ 39,587,815	(1)
February 1 through 28	0	N/A	0	$ 39,587,815	(1)
March 1 through 31	0	N/A	0	$ 39,587,815	(1)
April 1 through 30	0	N/A	0	$ 39,587,815	(1)
May 1 through 31	0	N/A	0	$ 40,000,000	(2)
June 1 through 30	0	N/A	0	$ 40,000,000	(2)
July 1 through 31	0	N/A	0	$ 40,000,000	(2)
August 1 through 31	0	N/A	0	$ 40,000,000	(2)
September 1 through 30	0	N/A	0	$ 40,000,000	(2)
October 1 through 31	0	N/A	0	$ 40,000,000	(2)
November 1 through 30	7,269	22.00	7,269	$ 39,840,090	(2)
December 1 through 31	187,435	21.91	194,704	$ 35,733,686	(2)

(1) In April 2017, the Company's Board of Directors authorized a new plan for the repurchase of up to an aggregate of $40.0 million of the Company's ordinary shares in the open market, subject to normal trading restrictions, or in privately negotiated transactions. This plan was announced in a press release dated April 24, 2017 and expired on April 24, 2018.

(2) In May 2018, the Company's Board of Directors authorized a new plan for the repurchase of up to an aggregate of $40.0 million of the Company's ordinary shares in the open market, subject to normal trading restrictions, or in privately negotiated transactions. This plan was announced in a press release dated May 22, 2018 and will expire on April 30, 2019.

ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT

None.

ITEM 16G. CORPORATE GOVERNANCE

We are a foreign private issuer whose ordinary shares are listed on the Nasdaq Global Select Market. As such, we are required to comply with U.S. federal securities laws, including the Sarbanes-Oxley Act, and the Nasdaq rules, including the Nasdaq corporate governance requirements. The Nasdaq rules provide that foreign private issuers may follow home country practice in lieu of certain qualitative listing requirements subject to certain exceptions and except to the extent that such exemptions would be contrary to U.S. federal securities laws, so long as the foreign issuer discloses that it does not follow such listing requirement and describes the home country practice followed in its reports filed with the SEC. Below is a concise summary of the significant ways in which our corporate governance practices differ from the corporate governance requirements of Nasdaq applicable to domestic U.S. listed companies:

The Nasdaq rules require that an issuer have a quorum requirement for shareholders meetings of at least one-third of the outstanding shares of the issuer's common voting stock. We have chosen to follow home country practice with respect to the quorum requirements of an adjourned shareholders meeting. Our articles of association, as permitted under the Israeli Companies Law and Israeli practice, provide that the quorum requirements for an adjourned meeting are the presence of a minimum of two shareholders present in person.

The Nasdaq rules require shareholder approval of stock option plans and other equity compensation arrangements available to officers, directors or employees and any material amendments thereto. We have decided to follow home country practice in lieu of obtaining shareholder approval for our current or future equity incentive plans. However, subject to exceptions permitted under the Companies Law, we are required to seek shareholder approval of any grants of options to directors and controlling shareholders or plans that require shareholder approval for other reasons.

Additionally, we have chosen to follow our home country practice in lieu of the requirements of Nasdaq Rule 5250(d)(1), relating to an issuer's furnishing of its annual report to shareholders. Specifically, we file annual reports on Form 20-F, which contain financial statements audited by an independent accounting firm, electronically with the SEC and post a copy on our website.

ITEM 16H. MINE SAFETY DISCLOSURE

Not applicable.

PART III

ITEM 17. FINANCIAL STATEMENTS

We have responded to Item 18 in lieu of this item.

ITEM 18. FINANCIAL STATEMENTS

The Financial Statements required by this item are found at the end of this annual report, beginning on page F-1.

ITEM 19. EXHIBITS

The exhibits filed with or incorporated into this annual report are listed on the index of exhibits below.

Exhibit No.	Exhibit
1.1	Memorandum of Association ¶ (A)
1.2	Amended and Restated Articles of Association (B)
4.1	Form of Directors and Officers Indemnity Deed (C)
4.2	Distributor Agreement with Bynet Data Communications Ltd. (D)
4.3	Summary of Material Terms of the Lease Agreements for the Company's Headquarters (E)
4.4	1997 Key Employee Share Incentive Plan, as amended and restated*
4.5	2010 Addendum (for international grantees) (F)
4.6	Radware Ltd. – 2010 Employee Share Purchase Plan (G)
4.7	Amended and Restated Compensation Policy for Executive Officers and Directors (H)
8.1	List of Subsidiaries*
12.1	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002*
12.2	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002*
13.1	Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**
13.2	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**
15.1	Consent of Independent Registered Public Accounting Firm*
101	The following financial information from the Registrant's Annual Report on Form 20-F for the year ended December 31, 2018, formatted in XBRL (eXtensible Business Reporting Language): (i) Consolidated Balance Sheets; (ii) Consolidated Statements of Operations; (iii) Consolidated Statement of Comprehensive Income (Loss); (iv) Statements of Changes in Shareholders' Equity; (v) Consolidated Statements of Cash Flows; and (vi) Notes to Consolidated Financial Statements, tagged as blocks of text and in detail*

¶ Translated from Hebrew

* Filed herewith.

** Furnished herewith.

(A) Incorporated by reference to Exhibit 3.1 to the Registration Statement on Form S-8, filed with the SEC on December 30, 2013.

(B) Incorporated by reference to Exhibit 3.2 to the Registration Statement on Form S-8, filed with the SEC on December 30, 2013.

(C) Incorporated by reference to Annex B to the Proxy Statement filed as Exhibit 1.2 to Report of Foreign Private Issuer on Form 6-K submitted to the SEC on July 28, 2011.

(D) Incorporated by reference to Exhibit 4.3 to the Annual Report on Form 20-F for the year ended December 31, 2001, filed with the SEC on April 5, 2002.

(E) Incorporated by reference to Exhibit 4.7 to the Annual Report on Form 20-F for the year ended December 31, 2008, filed with the SEC on March 25, 2009.

(F) Incorporated by reference to Exhibit 4.8 to the Annual Report on Form 20-F for the year ended December 31, 2009, filed with the SEC on April 29, 2010.

(G) Incorporated by reference to Exhibit 4.9 to the Annual Report on Form 20-F for the year ended December 31, 2009, filed with the SEC on April 29, 2010.

(H) Incorporated by reference to Annex A to the Proxy Statement filed as Exhibit 99.2 to Report of Foreign Private Issuer on Form 6-K submitted to the SEC on August 2, 2018.

SIGNATURE

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.

RADWARE LTD.

By:/s/ Roy Zisapel
Roy Zisapel
Chief Executive Officer

Date: April 15, 2019

RADWARE LTD. AND ITS SUBSIDIARIES

CONSOLIDATED FINANCIAL STATEMENTS

AS OF DECEMBER 31, 2018

U.S. DOLLARS IN THOUSANDS

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of

RADWARE LTD.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Radware Ltd. and subsidiaries ("the Company") as of December 31, 2018 and 2017, the related consolidated statements of income (loss), comprehensive income (loss), changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018 and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have 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, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated April 15, 2019 expressed an unqualified opinion thereon.

Adoption of Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers (Topic 606):

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for revenue in 2018 due to the adoption of Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers (Topic 606), and the related amendments.

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 consolidated 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 consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KOST FORER GABBAY & KASIERER
A Member of Ernst & Young Global

We have served as the Company's auditor since 2002.
Tel-Aviv, Israel
April 15, 2019

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of
RADWARE LTD.

Opinion on the Internal Control over Financial Reporting

We have audited Radware Ltd. and subsidiaries' internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) ("the COSO criteria"). In our opinion, Radware Ltd. and subsidiaries ("the Company") maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of income (loss), comprehensive income (loss), changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018 and the related notes and our report dated April 15, 2019 expressed an unqualified opinion thereon.

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

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

Tel-Aviv, Israel /s/ KOST FORER GABBAY & KASIERER
April 15, 2019 A Member of Ernst & Young Global

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RADWARE LTD. AND ITS SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

U.S. dollars in thousands

	December 31, 2018		2017	
ASSETS				
CURRENT ASSETS:				
Cash and cash equivalents	$	45,203	$	65,237
Available-for-sale marketable securities		15,742		42,573
Short-term bank deposits		255,454		93,151
Trade receivables (net of allowance for doubtful accounts and sales reserves in a total amount of $ 1,770 and $ 1,993 in 2018 and 2017, respectively)		17,166		16,150
Other current assets and prepaid expenses		7,071		14,574
Inventories		18,401		18,772
Total current assets		359,037		250,457
LONG-TERM INVESTMENTS:				
Available-for-sale marketable securities		84,669		54,427
Long-term bank deposits		-		88,911
Severance pay fund		2,973		3,251
Total long-term investments		87,642		146,589
Property and equipment, net		23,677		23,642
Intangible assets, net		9,467		10,415
Goodwill		32,174		32,174
Other long-term assets		20,724		8,133
Total assets	$	532,721	$	471,410

The accompanying notes are an integral part of the consolidated financial statements.

RADWARE LTD. AND ITS SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

U.S. dollars in thousands, except share and per share data

	December 31, 2018	December 31, 2017
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Trade payables	$4,483	$5,367
Deferred revenues	83,955	69,829
Employees and payroll accruals	17,505	16,470
Other payables and accrued expenses	12,091	15,704
Total current liabilities	118,034	107,370
LONG-TERM LIABILITIES:		
Deferred revenues	43,796	43,482
Other long-term liabilities	6,934	5,202
Total long-term liabilities	50,730	48,684
COMMITMENTS AND CONTINGENT LIABILITIES		
SHAREHOLDERS' EQUITY:		
Share capital - Ordinary shares of NIS 0.05 par value - Authorized: 60,000,000 at December 31, 2018 and 2017; Issued: 56,293,017 and 53,884,864 shares at December 31, 2018 and 2017, respectively; Outstanding: 46,347,403 and 44,133,954 shares at December 31, 2018 and 2017, respectively	693	673
Additional paid-in capital	383,536	349,250
Treasury stock (9,945,614) and (9,750,910) of Ordinary shares at December 31, 2018 and 2017, respectively	(120,717)	(116,442)
Accumulated other comprehensive loss	(1,110)	(443)
Retained earnings	101,555	82,318
Total shareholders' equity	363,957	315,356
Total liabilities and shareholders' equity	$532,721	$471,410

The accompanying notes are an integral part of the consolidated financial statements.

RADWARE LTD. AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME (LOSS)

U.S. dollars in thousands, except per share data

	Year ended December 31,		
	2018	2017	2016
Revenues:			
Products	$118,062	$117,968	$110,186
Services	116,342	93,401	86,399
Total revenues	234,404	211,369	196,585
Cost of revenues:			
Products	30,803	30,862	27,320
Services	10,872	8,754	8,375
Total cost of revenues	41,675	39,616	35,695
Gross profit	192,729	171,753	160,890
Operating expenses, net:			
Research and development, net	57,674	59,003	51,732
Sales and marketing	111,386	108,744	103,774
General and administrative	16,145	17,577	18,133
Other income	-	(6,900)	-
Total operating expenses, net	185,205	178,424	173,639
Operating income (loss)	7,524	(6,671)	(12,749)
Financial income, net	7,274	4,830	5,741
Income (loss) before taxes on income	14,798	(1,841)	(7,008)
Taxes on income	3,063	5,652	1,651
Net income (loss)	$11,735	$(7,493)	$(8,659)
Basic net earnings (loss) per share	$0.26	$(0.17)	$(0.20)
Diluted net earnings (loss) per share	$0.25	$(0.17)	$(0.20)

The accompanying notes are an integral part of the consolidated financial statements.

RADWARE LTD. AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

U.S. dollars in thousands, except per share data

	Year ended December 31, 2018	2017	2016
Net income (loss)	$ 11,735	$ (7,493)	$ (8,659)
Other comprehensive income (loss) before tax:			
Unrealized gains (losses) on available-for-sale securities:			
Changes in unrealized gains (losses)	(866)	(530)	68
Less: reclassification adjustments for losses (gains) included in net income (loss)	-	(18)	(1,771)
Other comprehensive loss before tax	(866)	(548)	(1,703)
Income tax benefits related to components of other comprehensive loss	199	125	426
Other comprehensive loss, net of tax	(667)	(423)	(1,277)
Comprehensive income (loss)	$ 11,068	$ (7,916)	$ (9,936)

The accompanying notes are an integral part of the consolidated financial statements.

RADWARE LTD. AND ITS SUBSIDIARIES
STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

U.S. dollars in thousands, except share data

	Number of outstanding ordinary shares	Share capital	Additional paid-in capital	Treasury stock, at cost	Accumulated other comprehensive income (loss)	Retained earnings	Total
Balance as of January 1, 2016	44,778,847	$ 661	$ 312,784	$ (94,049)	$ 1,257	$ 98,470	$ 319,123
Repurchase of ordinary shares	(1,884,030)	-	-	(21,980)	-	-	(21,980)
Issuance of shares upon exercise of stock options	294,033	2	1,581	-	-	-	1,583
Stock based compensation	-	-	11,520	-	-	-	11,520
Tax deficiency related to exercise of stock options	-	-	(547)	-	-	-	(547)
Other comprehensive loss, net of tax	-	-	-	-	(1,277)	-	(1,277)
Net loss	-	-	-	-	-	(8,659)	(8,659)
Balance as of December 31, 2016	43,188,850	663	325,338	(116,029)	(20)	89,811	299,763
Repurchase of ordinary shares	(25,782)	-	-	(413)	-	-	(413)
Issuance of shares upon exercise of stock options	970,886	10	10,881	-	-	-	10,891
Stock based compensation	-	-	13,031	-	-	-	13,031
Other comprehensive loss, net of tax	-	-	-	-	(423)	-	(423)
Net loss	-	-	-	-	-	(7,493)	(7,493)
Balance as of December 31, 2017	44,133,954	673	349,250	(116,442)	(443)	82,318	315,356
Cumulative-effect adjustment from adoption of ASC 606	-	-	-	-	-	7,502	7,502
Repurchase of ordinary shares	(194,704)	-	-	(4,275)	-	-	(4,275)
Issuance of shares upon exercise of stock options	2,408,153	20	21,783	-	-	-	21,803
Stock based compensation	-	-	12,503	-	-	-	12,503
Other comprehensive loss, net of tax	-	-	-	-	(667)	-	(667)
Net income	-	-	-	-	-	11,735	11,735
Balance as of December 31, 2018	46,347,403	693	383,536	(120,717)	(1,110)	101,555	363,957

The accompanying notes are an integral part of the consolidated financial statements.

RADWARE LTD. AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

U.S. dollars in thousands

	Year ended December 31,		
	2018	2017	2016
Cash flows from operating activities:			
Net income (loss)	$11,735	$(7,493)	$(8,659)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	9,782	11,232	10,372
Stock based compensation	12,503	13,031	11,520
Gain from sale of available-for-sale marketable securities	-	(18)	(1,771)
Amortization of premiums, accretion of discounts and accrued interest on available-for-sale marketable securities, net	1,395	1,546	1,949
Accrued interest on bank deposits	(2,391)	226	1,179
Increase (decrease) in accrued severance pay, net	323	(210)	401
Decrease (increase) in trade receivables, net	(1,169)	3,390	7,003
Changes in deferred income taxes, net	(2,308)	91	(2,687)
Decrease (increase) in other current assets and prepaid expenses	5,035	(7,969)	883
Decrease (increase) in inventories			