NOVA MEASURING INSTRUMENTS LTD
Form 20-F
March 28, 2012

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

Form 20-F

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

OR

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

For the fiscal year ended December 31, 2011

OR

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

OR

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

Commission File Number 000-30668

NOVA MEASURING INSTRUMENTS LTD.
(Exact name of Registrant as specified in its charter)

Nova Measuring Instruments Ltd.	Israel
(Translation of Registrant's name into English)	(Jurisdiction of incorporation or organization)

Weizmann Science Park, Einstein St., Building 22, 2nd Floor, Ness-Ziona, Israel
(Address of principal executive offices)

Dror David, +972-73-2295833, +972-8-9407776, P.O.B 266, Rehovot 76100, Israel
(Name, Telephone, E-mail and/or Facsimile number and Address of the Registrant's 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, nominal value NIS 0.01 per share	The NASDAQ Global Market

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

None

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

None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report: 26,467,542 ordinary shares, NIS 0.01 nominal (par) value per share, as of December 31, 2011.

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

Yes o No x

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 o No x

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 x   No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes o   No o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of “accelerated filer and large accelerated filer” in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer o   Accelerated filer x   Non-accelerated filer o

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

U.S. GAAP x

International Financing Reporting Standards as issued by the International Accounting Standards Board o

Other o

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 o   Item 18 o

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 o   No x

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Introduction

In this Annual Report, the “Company”, “Nova”, “we” or “our” refers to Nova Measuring Instruments Ltd. and its consolidated subsidiaries, when the context requires.

Our Functional Currency

Unless otherwise indicated, all amounts herein are expressed in United States dollars (“U.S. dollars”, “dollars”, “USD”, “US$” or “$”).

The currency of the primary economic environment in which we operate is the U.S. dollar, since substantially all our revenues to date have been denominated in U.S. dollars and over 50% of our expenses are in U.S. dollars or in New Israeli Shekels linked to the dollar. Transactions and balances denominated in dollars are presented at their original amounts. Non-dollar transactions and balances have been re-measured into dollars as required by the principles in ASC 830 Foreign Currency Matters. All exchange gains and losses from such re-measurement are included in the net financial income when they arise.

Cautionary Statement Regarding Forward-Looking Statements

Certain information contained herein, which does not relate to historical financial information, may be deemed to constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The words or phrases “will likely result”, “are expected to”, “will continue”, “is anticipated”, “estimate”, “project”, “believe” or similar expressions identify “forward looking statements”. Such statements, including without limitation, statements relating to our anticipated sales, revenues and expenses in 2012, our expectations with respect to our business and operations and our ability to gain market share are subject to certain risks and uncertainties that could cause actual results to differ materially from historical results and those presently anticipated or projected. We wish to caution readers not to place undue reliance on any such forward-looking statements, which speak only as of the date made. We cannot guarantee future results, levels of activity, performance or achievements. We also undertake no obligation to release publicly any revisions to these forward–looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. Among the factors that could cause our actual results in the future to differ materially from any opinions or statements expressed with respect to future periods are competitive industry conditions and the ability to forecast the needs of the semiconductor industry with respect to the very cyclical nature of the industry and the very fast pace of technology evolutions and factors related to the conditions of the global markets and the global economy. Various other factors that could cause our actual results to differ materially are set forth in “Item 3D. Risk Factors” in this annual report on Form 20-F and elsewhere herein.

PART I

Item 1. Identity of Directors, Senior Management and Advisors

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

3A. Selected Financial Data

The following selected consolidated financial data as of December 31, 2010 and 2011 and for the years ended December 31, 2009, 2010 and 2011 have been derived from our audited consolidated financial statements included elsewhere in this annual report. These financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"), and audited by our independent registered public accounting firm. The consolidated selected financial data as of December 31, 2009, 2008 and 2007 and for the years ended December 31, 2008 and 2007 have been derived from other consolidated financial statements not included in this Form 20-F that were also prepared in accordance with U.S. GAAP and audited by our independent registered public accounting firm. The selected consolidated financial data set forth below should be read in conjunction with and are qualified by reference to "Item 5. Operating and Financial Review and Prospects" and the consolidated financial statements and notes thereto and other financial information included elsewhere in this annual report on Form 20-F.

Summary of Consolidated Financial Data

	Year ended December 31,				
	2007	2008	2009	2010	2011
	(in thousands, except per share data)				
Consolidated Statement of Operations Data:					
Revenues	$58,077	$38,969	$39,318	$86,620	$102,828
Cost of revenues	33,251	25,986	21,731	39,204	44,832
Gross profit	24,826	12,983	17,587	47,416	57,996
Operating expenses:					
Research and development expenses, net	9,143	8,606	6,865	12,445	18,677
Sales and marketing expenses	10,175	7,503	6,014	10,133	11,373
General and administrative expenses	4,830	3,199	2,240	2,968	3,229
Other operating expenses	3,831	633	-	-	-
Total operating expenses	27,979	19,941	15,119	25,546	33,279
Operating income (loss)	(3,153)	(6,958)	2,468	21,870	24,717
Financing income (expenses), net	(764)	1,537	163	305	901
Income (loss) before income taxes	(3,917)	(5,421)	2,631	22,175	25,618
Benefit from deferred income taxes	-	-	-	-	2,500
Net income (loss) for the year	$(3,917)	$(5,421)	$2,631	$22,175	$28,118
Income (loss) per share:					
Basic	$(0.21)	$(0.28)	$0.14	$0.91	$1.07

Diluted	$(0.21)	$(0.28)	$0.13	$0.86	$1.04
Shares used in calculation of net income (loss) per share:					
Basic	18,606	19,369	19,473	24,448	26,232
Diluted	18,606	19,369	20,089	25,692	26,931

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	2007	2008	December 31, 2009 (in thousands)	2010	2011
Consolidated Balance Sheet Data:					
Working capital	20,660	20,246	25,067	65,442	94,669
Total assets	48,385	35,791	40,924	93,377	122,947
Capital stock (including additional paid-in capital)	83,456	84,024	85,696	104,646	108,710
Shareholders' equity	27,584	22,341	26,915	68,384	99,906

3B. Capitalization and Indebtedness

Not applicable.

3C. Reasons for the Offer and Use of Proceeds

Not applicable.

3D. Risk Factors

Risks Related to Our Business and Our Industry

Because substantially most of our current sales are dependent on two specific product lines, factors that adversely affect the pricing and demand for these product lines could substantially reduce our sales.

We are currently dependent on two process control product lines. We expect revenues from these product lines to continue to account for a substantial portion of our revenues for at least the next 12 months. As a result, factors adversely affecting the pricing of, or demand for, these product lines, such as competition and technological change, could significantly reduce our sales.

The markets we target are highly cyclical and it is difficult to predict the length and strength of any downturn or expansion period.

The semiconductor capital equipment market and industries, which are highly cyclical, experienced a steep upturn in 2010, after a significant decline in sales in 2008 and 2009. According to Gartner, Inc., a market research company, the forecast for year 2012 (as of March 2012), predicts a 9.8% decrease in wafer fab equipment (WFE) spending. Although we rely on market research companies, we cannot predict the length and strength of the downturns or expansions.

Our inability to significantly reduce spending during a protracted slowdown in the semiconductor industry could reduce our prospects of achieving continued profitability.

Historically, we have derived all of our revenues, and we expect to continue to derive practically all of our revenues, from sales of our products and related services to the semiconductor industry. Our business depends in large part upon capital expenditures by semiconductor manufacturers, which in turn depend upon the current and anticipated demand for semiconductors. The semiconductor industry has experienced severe and protracted cyclical downturns and upturns. Specifically, during 2010, the semiconductor industry experienced a steep upturn of over 100%, which followed a severe downturn in 2008 and 2009. During cyclical downturns, as those we have experienced in the past and are likely to experience in the future, material reductions in the demand for the type of capital equipment and process technology that we offer may result in a decline in our sales. In addition, our ability to significantly reduce expenses in response to any downturn or slowdown in the rate of capital investment by manufacturers in these industries may be limited because of:

- Ÿ our continuing need to invest in research and development;
- Ÿ our continuing need to market our new products to new and existing customers; and
- Ÿ our extensive ongoing customer service and support requirements worldwide.

As a result, we may have difficulty achieving continued profitability.

If we do not respond effectively and on a timely basis to rapid technological change, our ability to attract and retain customers could be diminished, which would have an adverse affect on our sales and ability to remain competitive.

The semiconductor manufacturing industry is characterized by rapid technological change, new product introductions and enhancements and evolving industry standards. Our ability to remain competitive and generate sales revenue will depend in part upon our ability to develop new and enhanced systems at competitive prices in a timely and cost-effective manner and to accurately predict technology transitions. Because new product development commitments must be made well in advance of sales, new product decisions must anticipate the future demand for products. If we fail to correctly anticipate future demand for products, our sales and competitive position will suffer. In addition, the development of new measurement technologies, new product introductions or enhancements by our competitors could cause a decline in our sales or loss of market acceptance of our existing products.

We depend on OEM suppliers for sales of our integrated metrology systems, and the loss of our OEM suppliers as customers or as business partners could harm our business.

We believe that sales of integrated metrology systems will continue to be an important source of our revenues. Sales of our integrated metrology systems depend upon the ability of OEMs (original equipment manufacturers) to sell semiconductor equipment products that are able to include our metrology systems as components. If our OEMs are unable to sell such products, or if they choose to focus their attention on products that do not integrate our systems, our business could suffer. If we were to lose our OEMs as customers or as business partners for any reason, our inability to realize sales from integrated metrology systems could harm our business. We may not be able to develop or market new products, which could slow or prevent our growth.

If any of our systems fail to meet or exceed our internal quality specifications, we cannot ship them until such time as they have met such specifications. If we experience significant delays or are unable to ship our products to our customers as a result of our internal processes or for any other reason, our business and reputation may be adversely affected.

Our products are complex and require technical expertise to design and manufacture. Various problems occasionally arise during the manufacturing process that may cause delays and/or impair product quality. We actively monitor our manufacturing processes to ensure that our products meet our internal quality specifications. Any significant delays stemming from the failure of our products to meet or exceed our internal quality specifications, or for any other reasons, would delay our shipments. Shipment delays could be harmful to our business, revenues and reputation in the industry.

We are exposed to cyber security risks that, if materialized, may affect our business and operations.

Our global operations are linked by information systems, including telecommunications, the internet, our corporate intranet, network communications, email and various computer hardware and software applications. Despite our implementation of network security measures, our tools and servers are vulnerable to computer viruses, break-ins and similar disruptions from unauthorized tampering with our computer systems and tools located at customer sites, or could be subject to system failures or malfunctions for other reasons. System failures or malfunctioning could disrupt our operations and our ability to timely and accurately process and report key components of our financial results.

We may incorporate open source technology in some of our software and products, which may expose us to liability and have a material impact on our product development and sales

Some of our software and products may utilize open source technologies. These technologies may be subject to certain open source licenses, including but not limited to the General Public License, which, when used or integrated in particular manners, impose certain requirements on the subsequent use of such technologies, and pose a potential risk to proprietary nature of products. In the event that we have or will in the future, use or integrate software that is subject to such open source licenses into or in connection with our products in such ways that will trigger certain requirements of these open source licenses, we may (i) be required to include certain notices and abide by other requirements in the absence of which we may be found in breach of the copyrights owned by the creators of such open source technologies; and/or (ii) be required to disclose our own source code or parts thereof to the public, which could enable our competitors to eliminate some or any technological advantage that our products may have over theirs. Any such requirement to disclose our source code or other confidential information related to our products, and the failure to abide by license requirement resulting in copyright infringement, could materially adversely affect our competitive position and impact our business results of operations and financial condition.

New product lines that we may introduce in the future may contain defects, which will require us to allocate time and financial resources to correct.

Our new product lines may contain defects when first introduced. If there are defects, we will need to divert the attention of our personnel from our ongoing product development efforts to address the detection and correction of the defects. In the past, no liability claims have been filed against us for damages related to product defects, and we have not experienced any material delays as a result of product defects. However, we cannot provide assurances that we will not incur these costs or liabilities or experience these lags or delays in the future. Moreover, the occurrence of such defects, whether caused by our products or the products of another vendor, may result in significant customer relations problems and adversely affect our reputation and may impair the market acceptance of our products.

We have historically generated losses and may incur future losses.

Since our inception in 1993, we have had several years of losses and only three profitable years. We may incur a net loss in future years. As of December 31, 2011, we had an accumulated deficit of approximately $8.5 million. We plan to increase our aggregate operating expenses in 2012 relative to 2011. However, our ability to generate profits is dependent mainly on our ability to increase sales. In the future, our sales may not grow and we may not achieve profitability.

Our dependence on a single manufacturing facility magnifies the risk of an interruption in our production capabilities.

We have only one manufacturing facility, which is located in Ness-Ziona, Israel. Although we adopted a disaster recovery plan, any event affecting this site, including natural disaster, labor stoppages or armed conflict, may disrupt or indefinitely discontinue our manufacturing capabilities and could significantly impair our ability to fulfill orders and generate revenues, thus negatively impacting our business.

Because shipment dates may be changed and customers may cancel or delay orders with little or no penalty, our backlog may not be a reliable indicator of actual sales.

We schedule production of our systems based upon order backlog and customer forecasts. We include in backlog only those orders to which the customer has assigned a purchase order number and for which delivery has been specified. In general, because shipment dates may be changed and customers may cancel or delay orders with little or no penalty, our backlog as of any particular date may not be a reliable indicator of actual sales for any succeeding period.

We experience quarterly fluctuations in our operating results, which may adversely impact our share price.

Our quarterly operating results have fluctuated significantly in the past. This trend may continue. A principal reason is that we derive a substantial portion of our revenue from the sale of a relatively small number of systems to a relatively small number of customers. As a result, our revenues and results of operations for any given quarter may decrease due to factors relating to the timing of orders, the timing of shipments of systems, and the timing of recognizing these revenues. Furthermore, our quarterly results are affected by the highly cyclical nature of the semiconductor capital equipment market and industries.

We also have a limited ability to predict revenues for future quarterly periods and, as a result, face risks of revenue shortfalls. If the number of systems we actually ship, and thus the amount of revenues we are able to record in any particular quarter, is below our expectations, the adverse effect may be magnified by our inability to adjust spending quickly enough to compensate for the revenue shortfall.

We depend on a small number of large customers, and the loss of one or more of them would lower our revenues.

Like our peers serving the semiconductor market, our customer base is highly concentrated among a limited number of large customers, primarily because the semiconductor industry is dominated by a small number of large companies. We anticipate that our revenues will continue to depend on a limited number of major customers, although the companies considered to be our major customers and the percentage of our revenue represented by each major customer may vary from period to period. The loss of any one of our major customers would adversely affect our sales and revenues. Furthermore, if any of our customers become insolvent or have difficulties meeting their financial obligations to us for any reason, we may suffer losses.

We operate in an extremely competitive market, and if we fail to compete effectively, our revenues and market share will decline.

Although the market for process control systems used in semiconductor manufacturing is currently concentrated and characterized by relatively few participants, the semiconductor capital equipment industry is intensely competitive. We compete mainly with Nanometrics, Inc., Rudolph Technologies, Inc., and KLA-Tencor Corp. which manufacture and sell integrated and/or stand-alone process control systems. In addition, we compete with original semiconductor equipment manufacturers, such as Tokyo Electron Ltd., which manufactures integrated metrology products and with original semiconductor equipment manufacturers, such as Applied Materials, Inc., which develop in-situ sensors and products. Established companies, both domestic and foreign, compete with our product lines, and new competitors enter our market from time to time. Some of our competitors have greater financial, engineering, manufacturing and marketing resources than we do. If a particular customer selects a competitor's capital equipment, we expect to experience difficulty in selling to that customer for a significant period of time. A substantial investment is required by customers to evaluate, test, select and integrate capital equipment into a production line. As a result, once a manufacturer has selected a particular vendor's capital equipment, we believe that the manufacturer generally relies upon that equipment for the specific production line application and frequently will attempt to consolidate its other capital equipment requirements with the same vendor. Accordingly, unless our systems offer performance or cost advantages that outweigh a customer's expense of switching to our systems, it will be difficult for us to achieve significant sales from that customer once it has selected another vendor's system for an application. We believe that our ability to compete successfully depends on a number of factors both within and outside of our control, including:

Ÿ the contribution of our equipment to the customers' productivity;

Ÿ our product quality and performance;

Ÿ our global technical service and support;

Ÿ the return on investment (ROI) of our equipment and its cost of ownership;

Ÿ the breadth of our product line;

Ÿ our success in developing and marketing new products; and

Ÿ the extendibility of our products.

If we fail to compete in a timely and cost-effective manner against current or future competitors, our revenues and market share will decline.

The ongoing consolidation in our industry may harm us if our competitors are able to offer a broader range of products and greater customer support than we can offer.

We believe that the semiconductor capital equipment market is undergoing consolidation. A number of capital equipment suppliers have been acquired by larger equipment manufacturers. For example, in 2005 Rudolph Technologies, Inc. acquired August Technologies, Inc., in 2006 Nanometrics acquired Soluris, Inc. and Accent Technologies, Inc., in 2007 KLA-Tencor Corp. acquired Therma-Wave, Inc. and Nanometrics acquired Tevet Ltd., and in 2011 Nanometrics acquired Nanda Technologies. We believe that similar acquisitions and business combinations involving our competitors and customers may occur in the future. These acquisitions could adversely impact our competitive position by enabling our competitors and potential competitors to expand their product offerings and customer service, which could provide them an advantage in meeting customers' needs, particularly with those customers that seek to consolidate their capital equipment requirements with a smaller number of vendors. The greater resources, including financial, marketing, intellectual property and support resources, of competitors involved in these acquisitions could allow them to accelerate the development and commercialization of new competitive products and the marketing of existing competitive products to their larger installed bases. Accordingly, such business combinations and acquisitions by competitors or customers could jeopardize our competitive position.

We may not be successful in our efforts to identify, complete and integrate future acquisitions, which could disrupt our current business activities and adversely affect our results of operations or future growth.

Any future acquisitions may involve many risks, including the risks of:

Ÿ diverting management’s attention and other resources from our ongoing business concerns;

Ÿ entering markets in which we have no direct prior experience;

Ÿ improperly evaluating new services, products and markets;

Ÿ being unable to maintain uniform standards, controls, procedures and policies;

Ÿ being unable to integrate new technologies or personnel;

Ÿ incurring the expenses of any undisclosed or potential liabilities; and

Ÿ the departure of key management and employees.

If we are unable to successfully complete future acquisitions or to effectively integrate any future acquisitions, our ability to grow our business or to operate our business effectively could be reduced, and our business, financial condition and operating results could suffer. Even if we are successful in completing acquisitions, we cannot assure you that we will be able to integrate the operations of the acquired business without encountering difficulty regarding different business strategies with respect to marketing and integration of personnel with disparate business backgrounds and corporate cultures.

A couple of our major customers have no cancellation fee with regard to cancellation of orders, and we have been facing difficulties to collect cancellation fees from another customer.

Our supply agreements with some of our largest customers do not include cancellation fee provisions with regard to cancellation of these customer's orders. In addition, during the recent slowdown in the semiconductors industry, another customer cancelled its orders and we were unable to collect cancelation fees from that customer. Due to this reason, our ability to rely on our backlog for future forecasting and planning is limited, which in turn may hamper our ability to forecast our financial results.

Some of our contracts and arrangements potentially subject us to the risk of significant or non-limited liability.

We produce highly complex optical and electronic components and, accordingly, there is a risk that defects may occur in any of our products. Such defects can give rise to significant costs, including expenses relating to recalling products, replacing defective items, writing down defective inventory and loss of potential sales. In addition, the occurrence of such defects may give rise to product liability and warranty claims, including liability for damages caused by such defects.

In our commercial relationship with customers, we attempt to negotiate waivers of consequential damages arising from damages for loss of use, loss of product, loss of revenue and loss of profit caused by our products. Similarly, with respect to our commercial relationship with subcontractors and suppliers, we attempt to negotiate arrangements which do not include a limitation of liabilities and limitation of consequential damages. However, some contracts and arrangements we are bound by expose us to product liability claims resulting in personal injury or death, up to an unlimited amount, and the incurrence of the risk of material penalties for consequential or liquidated damages. Additionally, under such contracts and arrangements, we may be named in product liability claims even if there is no evidence that our products caused the damage in question, and such claims could result in significant costs and expenses relating to attorneys' fees and damages.

Although we have not incurred material penalties for consequential or liquidated damages during the past, we may incur such penalties in the future. Such penalties for consequential or liquidated damages may be significant and could negatively affect our financial condition or results of operations.

Because of our small size, we depend on a small number of employees who possess both executive and technical expertise, and the loss of any of these key employees would hurt our ability to implement our strategy and to compete effectively.

Because of our small size and our reliance on employees with both executive and advanced technical skills, our success depends significantly upon the continued contributions of our officers and key personnel. All of our key management and technical personnel have expertise, which is in high demand among our competitors, and the loss of any of these individuals could cause our business to suffer. We do not maintain life insurance policies for our officers and directors.

Our lengthy sales cycle increases our exposure to customer delays in orders, which may result in obsolete inventory and volatile quarterly revenues.

Sales of our systems depend, in significant part, upon our customers adding new manufacturing capacity or expanding existing manufacturing capacity, both of which involve a significant capital commitment. We may experience delays in finalizing sales following initial system qualification while a customer evaluates and approves an initial purchase of our systems. In general, for new customers or applications, our normal sales cycle takes between six to 12 months to complete. During this time, we may expend substantial funds and management effort, but fail to make any sales. Lengthy sales cycles subject us to a number of significant risks, including inventory obsolescence and fluctuations in operating results, over which we have limited control.

Because of the technical nature of our business, our intellectual property is extremely important to our business, and our inability to protect our intellectual property would harm our competitive position.

As of March 1, 2012, we have been granted 95 U.S. patents and have 19 U.S. patent applications pending including US provisional patent applications. In addition, we have been granted approximately 46 non-U.S. patents and have 30 non-U.S. patent applications pending.

We cannot assure that:

- pending patent applications will be approved;
- any patents will be broad enough to protect our technology, will provide us with competitive advantages or will not be challenged or invalidated by third parties; or
- the patents of others will not have an adverse effect on our ability to do business.

We also cannot assure that others will not independently develop similar products, duplicate our products or, if patents are issued to us, design around these patents. Furthermore, because patents may afford less protection under foreign law than is available under U.S. law, we cannot assure that any foreign patents issued to us will adequately protect our proprietary rights.

In addition to patent protection, we also rely upon trade secret protection, employee and third-party nondisclosure agreements and other intellectual property protection methods to protect our confidential and proprietary information. Despite these efforts, we cannot be certain that others will not otherwise gain access to our trade secrets or disclose our technology.

Furthermore, we may be required to institute legal proceedings to protect our intellectual property. If such legal proceedings are resolved adversely to us, our competitive position and/or results of operations could be harmed. For additional information on our intellectual property, see "Item 4B – Intellectual Property" in this annual report on Form 20-F.

There has been significant litigation involving intellectual property rights in the semiconductor and related industries, and similar litigation involving Nova could force us to divert resources to defend against such litigation or deter our customers from purchasing our systems.

We have been, and may in the future be, notified of allegations that we may be infringing intellectual property rights possessed by others. In addition, we may be required to commence legal proceedings against third parties, which may be infringing our intellectual property, in order to defend our intellectual property. In the future, protracted litigation and expense may be incurred to defend ourselves against alleged infringement of third party rights or to defend our intellectual property against infringement by third parties. Adverse determinations in that type of litigation could:

- result in our loss of proprietary rights;
- subject us to significant liabilities, including treble damages in some instances;
- require us to seek licenses from third parties, which licenses may not be available on reasonable terms or at all; or
- prevent us from selling our products.

Any litigation of this type, even if we are ultimately successful, could result in substantial cost and diversion of time and effort by our management, which by itself could have a negative impact on our profit margin, available funds, competitive position and ability to develop and market new and existing products. For additional information on our intellectual property, see "Item 4B – Intellectual Property" in this annual report on Form 20-F.

We depend on a limited number of suppliers, and in some cases a sole supplier. Any disruption or termination of these supply channels may adversely affect our ability to manufacture our products and to deliver them to our customers.

We purchase components, subassemblies and services from a limited number of suppliers and occasionally from a single source. Disruption or termination of these sources could occur (due to several factors, including, but not limited to, work stoppages, acts of war, terrorism, fire, earthquake, energy shortages, flooding or other natural disasters), and these disruptions could have at least a temporary adverse effect on our operations. Although we generally maintain an inventory of critical components used in the manufacture and assembly of our systems, such supplies may not be sufficient to avoid potential delays that could have an adverse effect on our business.

To date, we have not experienced any material disruption or termination of our supply sources. However, on March 11, 2011, an earthquake followed by a tsunami devastated the north-east coast of Japan, causing thousands of deaths and extensive damage, as well as a potential nuclear disaster. Although our direct suppliers in Japan reported that damage to their physical assets was not significant on a consolidated basis and therefore we have no evidence that continuous supply will be interrupted, the damages caused to Japan's energy supplies, local infrastructure and distribution channels could potentially adversely affect us in the future. In addition, the 2011 floods in Thailand disrupted hard drive production by companies with factories in Thailand, including Seagate, Toshiba and Western Digital. As a results, Intel Corporation has cut its revenue forecast for the fourth quarter of 2011 by about 7%, saying that floods in Thailand that have constrained hard drive production will affect PC sales. Although we were not directly impacted by these specific cases, other cases in the future may impact our business.

A prolonged inability on our part to obtain components included in our systems on a cost-effective basis could adversely impact our ability to deliver products on a timely basis, which could harm our sales and customer relationships.

We are dependent on international sales, which expose us to foreign political and economic risks that could impede our plans for expansion and growth.

Our principal customers are located in Taiwan, South Korea, China, the United States, Germany, Japan and Singapore, and we produce our products in Israel. International operations expose us to a variety of risks that could seriously impact our financial condition and impede our growth. For instance, trade restrictions, changes in tariffs and import and export license requirements could adversely affect our ability to sell our products in the countries adopting or changing those restrictions, tariffs or requirements. This could reduce our sales by a material amount.

We may be affected by instability in the global economy, including the recent European economic and financial turmoil.

Instability in the global credit markets, including the recent European economic and financial turmoil related to sovereign debt issues in certain countries, the instability in the geopolitical environment in many parts of the world and other disruptions, such as changes in energy costs, may continue to put pressure on global economic conditions. The world has recently experienced a global macroeconomic downturn, and if global economic and market conditions, or economic conditions in key markets, remain uncertain or deteriorate further, we may experience material impacts on our business, operating results, and financial condition.

Because we derive a significant portion of our revenues from sales in Asia, our sales could be hurt by the instability of Asian economies.

A number of Asian countries have experienced political and economic instability. For instance, Taiwan and China have had a number of disputes, as have North and South Korea, and Japan has for a number of years experienced significant economic instability. Additionally, the Asia-Pacific region is susceptible to the occurrence of natural disasters, such as earthquakes, cyclones, tsunamis and flooding. We have a subsidiary in Taiwan and we have significant customers in Japan and South Korea as well as in China. An outbreak of hostilities or other political upheaval, economic downturns or the occurrence of a natural disaster in these or other Asian countries would likely harm the operations of our customers in these countries, causing our sales to suffer.

A large number of our ordinary shares continue to be owned by a relatively small number of shareholders, whose future sales of our shares, if substantial, may depress our share price.

If our principal shareholders sell substantial amounts of our ordinary shares, including shares issued upon the exercise of outstanding options or warrants, the market price of our ordinary shares may fall. As of March 1, 2012, we had 26,549,142 ordinary shares outstanding. Based on reports filed with the Securities and Exchange Commission, which we also refer to herein as the Commission or SEC, information provided to us by our transfer agent and information provided by certain shareholders, our largest shareholder held approximately 8.2% of our outstanding ordinary shares as of March 1, 2012.

Certain shareholders may control the outcome of matters submitted to a vote of our shareholders, including the election of directors.

To the best of our knowledge, approximately 15% of our outstanding ordinary shares are cumulatively held by two of our shareholders. As a result, and although we are currently not aware of any voting agreement between such shareholders, if these shareholders voted together or in the same manner, they would have the ability to control the outcome of corporate actions requiring an ordinary majority vote of shareholders as set in the Company's Amended and Restated Articles of Association. Even if these two shareholders do not vote together, each one of them may have the ability to influence the outcome of corporate actions requiring the vote of shareholders as set in the Company's Amended and Restated Articles of Association. For additional information on our major shareholders, see "Item 7A – Major shareholders" in this annual report on Form 20-F.

The market price of our ordinary shares may be affected by a limited trading volume and may fluctuate significantly.

In the past there has been a limited public market for our ordinary shares and there can be no assurance that an active trading market for our ordinary shares will continue. An absence of an active trading market could adversely affect our shareholders' ability to sell our ordinary shares in short time periods. Our ordinary shares have experienced, and are likely to experience in the future, significant price and volume fluctuations, which could adversely affect the market price of our ordinary shares without regard to our operating performance.

We manage our available cash through various bank institutions and invest large portions of our cash reserves in bank deposits. A bankruptcy of one of the banks in which or through which we hold or invest our cash reserves, might prevent us to access that cash for an uncertain period of time.

We manage our available cash through various bank institutions and invest large portions of our cash reserves in bank deposits. As of December 31, 2011, approximately 96% of our cash reserves were invested in Israeli based bank institutions, and approximately 4% of our cash was invested in or through U.S. based bank institutions. A bankruptcy of one of the banks in which we hold our cash reserves or through which we invest our cash reserves, might prevent us to access that cash for an uncertain period of time.

We may fail to maintain effective internal control over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act of 2002.

The Sarbanes-Oxley Act of 2002 imposes certain duties on us and our executives and directors. Our efforts to comply with the requirements of Section 404, which started in connection with our Annual Report on Form 20-F for the fiscal year ended December 31, 2007, have resulted in increased general and administrative expense and a diversion of management time and attention, and we expect these efforts to require the continued commitment of resources. Section 404 of the Sarbanes-Oxley Act of 2002 requires (i) management's annual review and evaluation of our internal control over financial reporting and (ii) an attestation report issued by an independent registered public accounting firm on our internal control over financial reporting, in connection with the filing of our Annual Report on Form 20-F for each fiscal year. We have documented and tested our internal control systems and procedures in order for us to comply with the requirements of Section 404. While our assessment of our internal control over financial reporting resulted in our conclusion that as of December 31, 2011, our internal control over financial reporting was effective, we cannot predict the outcome of our testing in future periods. If we fail to maintain the adequacy of our internal controls, we may not be able to ensure that we can conclude on an ongoing basis that we have effective internal controls over financial reporting. Failure to maintain effective internal control over financial reporting could result in investigation or sanctions by regulatory authorities, and could have a material adverse effect on our operating results, investor confidence in our reported financial information, and the market price of our ordinary shares.

Risks Related to Operations in Israel

Potential political, economic and military instability in Israel may adversely affect our growth and revenues.

Our principal offices and manufacturing facilities and many of our suppliers are located in Israel. Although most of our sales are currently being made outside Israel, political, economic and military conditions in Israel directly affect our operations.

Since the establishment of the State of Israel in 1948, a number of armed conflicts have occurred between Israel and its Arab neighbors. In July 2006, there have been extensive hostilities along Israel's northern border with Lebanon and to a lesser extent in the Gaza Strip. Since June 2007, the Hamas militant group has taken over the Gaza Strip from the Palestinian Authority, and the hostilities along Israel's border with the Gaza Strip have increased, escalating to a wide scale attack by Israel in December 2008, in retaliation to rocket attacks into southern Israel. Moreover, since December 2010, there has been a wave of protests and civil resistance demonstrations in several countries in the Middle East and North Africa, including Egypt and Syria, which share a border with Israel. The demonstrations and acts of civil resistance in Egypt led to the resignation of the former Egyptian president Hosni Mubarak and to extensive revisions in the Egyptian governmental structure. It is not clear how this revolutionary wave, also known as the Arab Spring, will develop and how it will affect the political and security situation in the Middle East. It is also not clear how it will affect Israel and its relationship with its Arab neighbors. In addition, it is widely believed that Iran, which has previously threatened to attack Israel, has been stepping up its efforts to achieve nuclear capability. Iran is also believed to have a strong influence among extremist groups in the region, such as Hamas in Gaza and Hezbollah in Lebanon. The tension between Israel and Iran may escalate in the future and turn violent, which could affect the Israeli economy generally and us in particular. Moreover, the resumption of hostilities in the region, and the on-going tension in the region, have a negative effect on the stability of the region which might have a negative effect on our business and harm our growth and revenues. For further detail see "Item 4B — Political and economic conditions in Israel" in this annual report on Form 20-F.

Our operations may be disrupted by the obligation of key personnel to perform military service.

Some of our executive officers and employees in Israel are obligated to perform up to 84 days of military reserve service on a three year basis until the age of 40 for soldiers and until the age of 45 for officers. This time-period may be extended by the Military Chief of the General Staff and the approval of the Minister of Defense or by a directive of the Minister of Defense in the event of a declared national emergency. Our operations could be disrupted by the absence for a significant period of one or more of our executive officers or key employees due to military service. To date, our operations have not been materially disrupted as a result of these military service obligations. Any disruption in our operations due to such obligations would adversely affect our ability to produce and market our existing products and to develop and market future products.

Provisions of our Amended and Restated Articles of Association and Israeli law may delay, prevent or make difficult an acquisition of Nova, which could prevent a change of control and negatively affect the price of our ordinary shares.

Israeli corporate law regulates mergers, requires tender offers for acquisitions of shares above specified thresholds, requires special approvals for transactions involving directors, officers or significant shareholders and regulates other matters that may be relevant to these types of transactions. Furthermore, Israeli tax considerations may make potential transactions unappealing to us or to some of our shareholders. See Item 10.B, "Additional Information – Memorandum and Articles of Association." for a more detailed discussion regarding some anti-takeover effects of Israeli law.

These provisions of Israeli law may delay, prevent or make difficult an acquisition of Nova, which could prevent a change of control and therefore depress the price of our shares.

The rights and responsibilities of our shareholders are governed by Israeli law and differ in some respects from the rights and responsibilities of shareholders under U.S. law.

We are incorporated under Israeli law. The rights and responsibilities of holders of our ordinary shares are governed by our Amended and Restated Articles of Association and by the Israeli Companies Law, 5759-1999 (the "Companies Law"). These rights and responsibilities differ in some respects from the rights and responsibilities of shareholders in typical U.S. corporations. In particular, pursuant to the Companies Law each shareholder of an Israeli company has to act in good faith in exercising his or her rights and fulfilling his or her obligations toward the company and other shareholders and to refrain from abusing his power in the company, including, among other things, in voting at the general meeting of shareholders and class meetings, on amendments to a company's articles of association, increases in a company's authorized share capital, mergers, and transactions requiring shareholders' approval under the Companies Law. In addition, a controlling shareholder of an Israeli company or a shareholder who knows that it possesses the power to determine the outcome of a shareholder vote or who has the power to appoint or prevent the appointment of a director or officer in the company, or has other powers toward the company has a duty of fairness toward the company. However, Israeli law does not define the substance of this duty of fairness. Because Israeli corporate law has undergone extensive revision in recent years, there is little case law available to assist in understanding the implications of these provisions that govern shareholder behavior.

Because most of our revenues are generated in U.S. dollars, but a significant portion of our expenses is incurred in currencies other than U.S. dollars, and mainly New Israeli Shekels, our profit margin may be seriously harmed by currency fluctuations.

We generate most of our revenues in U.S. dollars, but incur a significant portion of our expenses in currencies other than U.S. dollars, and mainly New Israeli Shekels, commonly referred to as NIS. As a result, we are exposed to risk of devaluation of the U.S. dollar in relation to the NIS and other currencies. In that event, the dollar cost of our operations in countries other than the U.S. will increase and our dollar measured results of operations will be adversely affected. During 2011, the U.S. dollar appreciated against the NIS by 7.6%, after appreciating by approximately 1.7% in the previous three years. We cannot predict the future trends in the rate of devaluation or revaluation of the U.S. dollar against the NIS, and our operations also could be adversely affected if we are unable to hedge against currency fluctuations in the future.

We participate in government programs under which we receive tax and other benefits. These programs impose restrictions on our ability to use the technologies developed under these programs. In addition, the reduction or termination of these programs would increase our costs.

We receive grants from the Office of the Chief Scientist of the Israeli Ministry of Industry, Trade and Labor for research and development programs that meet specified criteria. We are also eligible to receive tax benefits under Israeli law for capital investments that are designated as "approved enterprises". To maintain our eligibility for these programs and tax benefits, we must continue to meet certain conditions, including paying royalties related to grants received and making specified investments in fixed assets. Some of these programs also restrict our ability to manufacture particular products and transfer particular technology, which was developed as part of the "approved enterprises" outside of Israel, by requiring approval of the research and development committee nominated by the Office of the Chief Scientist of the Israeli Ministry of Industry, Trade and Labor under applicable law. Such approval may be given only if the recipient abides by all the provisions of the law and related regulations. Approval to manufacture products outside of Israel or consent to the transfer of technology, if requested, might not be granted.

If we fail to comply with these conditions in the future, the benefits received could be cancelled. We could also be required to pay increased taxes or refund any benefits previously received, adjusted for inflation and interest. In each of the years 2011, 2010 and 2009, we recorded an aggregate of $2.2 million, in grants under Israeli government programs. As of December 31, 2011, our contingent liability to the Office of the Chief Scientist for grants received was approximately $17.5 million. (See also Note 7A to our consolidated financial statements contained elsewhere in this report). From time to time, we submit requests for new grants from the Office of the Chief Scientist and for expansion of our approved enterprise programs. These requests might not be approved. Also, the Israeli government may reduce or eliminate these benefits in the future. The termination or reduction of these grants or tax benefits could harm our business, financial condition and results of operations. In addition, if we increase our activities outside Israel due to, for example, future acquisitions, our increased activities generally will not be eligible for inclusion in Israeli tax benefit programs. Accordingly, our effective corporate tax rate could increase significantly in the future.

Any shareholder with a cause of action against us as a result of buying, selling or holding our ordinary shares may have difficulty asserting a claim under U.S. securities laws or enforcing a U.S. judgment against us or our officers, directors or Israeli auditors.

We are organized under the laws of the State of Israel, and we maintain most of our operations in Israel. Most of our officers and directors as well as our Israeli auditors reside outside of the United States and a substantial portion of our assets and the assets of these persons are located outside the United States. Therefore, if you wish to enforce a judgment obtained in the United States against us, or our officers, directors and auditors, you will probably have to file a claim in an Israeli court. Additionally, you might not be able to bring civil actions under U.S. securities laws if you file a lawsuit in Israel. We have been advised by our Israeli counsel that Israeli courts generally enforce a final executory judgment of a U.S. court for liquidated amounts in civil matters after a hearing in Israel. If a foreign judgment is enforced by an Israeli court, it will be payable in Israeli currency. However, payment in the local currency of the country where the foreign judgment was given shall be acceptable, subject to applicable foreign currency restrictions.

Our shares are listed for trade on more than one stock exchange, and this may result in price variations.

Our ordinary shares are listed for trading on The NASDAQ Global Market and on the Tel Aviv Stock Exchange, or TASE. This may result in price variations. Our ordinary shares are traded on these markets in different currencies, U.S. dollars on The NASDAQ Global Market and New Israeli Shekels on the TASE. These markets have different opening times and close on different days. Different trading times and differences in exchange rates, among other factors, may result in our shares being traded at a price differential on these two markets. In addition, market influences in one market may influence the price at which our shares are traded on the other.

We may be classified as a "passive foreign investment company" for U.S. income tax purposes, which could have significant and adverse tax consequences to U.S. shareholders.

Generally, if for any taxable year 75% or more of our gross income consists of specified types of passive income, or, on average, at least 50% of our assets are held for the production of, or produce, passive income, we may be characterized as a passive foreign investment company (a "PFIC") for U.S. federal income tax purposes. Classification of Nova as a PFIC could result in adverse U.S. tax consequences to our U.S. shareholders, including having gain realized on the sale or other disposition of our shares being treated as ordinary income as opposed to capital gain income, and computing tax liability on that gain, as well as on dividends and other distributions, as if the income had been earned ratably over each day in the U.S. holder's holding period for the shares. In addition, an interest charge will be imposed on the amount of the tax allocated to these taxable years. It may be possible for U.S. holders of common shares to mitigate certain of these consequences by making an election to treat us as a "qualified electing fund" under Section 1295 of the Internal Revenue Code of 1986, as amended (the "Code") or a "mark-to-market election" under Section 1296 of the Code. 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.

We believe that in 2011 we were not a PFIC. Nonetheless, because the determination of whether we are, or will be, a PFIC for a taxable year depends, in part, on the application of complex U.S. federal income tax rules, which are subject to various interpretations, there is a risk that we were a PFIC in 2011. Absent one of the elections described above, if we are a PFIC for any taxable year during which a U.S. holder holds our ordinary shares, we generally will continue to be treated as a PFIC regardless of whether we cease to meet the PFIC tests in one or more subsequent years. Currently we expect that we will not be a PFIC in 2012. However, PFIC status is determined based on our assets and income over the course of each taxable year, and is dependent on a number of factors, including the value of a corporation's assets, the trading price of our ordinary shares and the amount and type of its gross income. Therefore, there can be no assurances that we will not become a PFIC for the current fiscal year ending on December 31, 2012, or any future year, or that the Internal Revenue Service will not challenge any determination made by us concerning our PFIC. For a discussion on how we might be characterized as a PFIC and related tax consequences, please see the section of this annual report entitled "U.S. Taxation – Passive Foreign Investment Companies."

Item 4. Information on the Company

4.A History and Development of the Company

Nova Measuring Instruments Ltd. was incorporated in May 1993 under the laws of the State of Israel. We commenced operations in October 1993 to design, develop and produce integrated process control systems for use in the manufacture of semiconductors, also known as integrated circuits or chips.

In April 2000, we conducted an initial public offering and our shares were listed for trading on The NASDAQ Global Market (formally known as The NASDAQ National Market).

In June 2002, we listed our shares on the TASE, pursuant to legislation which enables Israeli companies whose shares are traded on certain stock exchanges outside of Israel to be registered on the TASE, while reporting, in substance, in accordance with the provision of the relevant foreign securities law applicable to the Company.

During 2003, we began expanding our product offerings to include stand-alone systems. In recent years stand alone metrology has started to account for a significant portion of our overall revenues.

Until 2008, most of our products were sold to original equipment manufacturers such as Applied Materials, Inc. and Ebara Corp., which later sold these products to semiconductor manufacturers. In recent years, however, we have completely changed our business model, selling most of our products directly to semiconductor manufacturers. Through this process, which has also enabled us to introduce to these customers additional products and features, we have improved our products gross margins.

On February 9, 2010, we successfully completed an underwritten public follow-on offering of 4,427,500 ordinary shares in consideration of approximately $17.0 million in net proceeds.

We have five fully owned subsidiaries in the U.S., Japan, Taiwan, Korea and the Netherlands. These subsidiaries are engaged in marketing activities and provide technical support to our customers.

Our main office, research and development and production facilities are located in Israel at the Weizmann Science Park, Building 22, 2nd Floor, Ness-Ziona. Our telephone number at our main office is +1-972-73-229-5600.

4.B Business Overview

We are a worldwide leading designer, developer and producer of integrated process control metrology systems and design, manufacture and sell leading edge stand-alone metrology used in the manufacturing process of semiconductors. Metrology systems measure various thin film properties and critical circuit dimensions during various steps in the semiconductor manufacturing process, allowing semiconductor manufacturers to increase quality, productivity and yields, lower their manufacturing costs and increase their profitability. We supply our metrology systems to major semiconductor manufacturers worldwide. Our systems were first installed in 1995 and, since that time, we have sold more than 2,500 metrology systems.

The semiconductor manufacturing process starts with a silicon wafer that has been highly polished on one side to a mirror finish, upon which circuits are constructed. To construct the circuits, a series of layers of thin films that act as conductors, semiconductors or insulators are applied to the polished side of the wafer. During the manufacturing process, these film layers are subjected to processes which remove portions of the film layers, create circuit patterns and perform other functions. The semiconductor manufacturing process requires exacting steps and strict control of equipment performance and process sequences. Tight control can be achieved through monitoring silicon wafers and measuring relevant parameters before or after each process step with metrology tools such as those we produce.

Prior to the introduction of our integrated metrology systems, process control was solely achieved through stand-alone measurement equipment. Stand-alone measurement equipment requires semiconductor manufacturers to interrupt the manufacturing process sequence, remove sample silicon wafers from the process equipment and place the silicon wafers on the stand-alone measuring or inspection tool. In contrast, our integrated metrology approach is based upon patented measuring methods that enable us to produce optical measuring systems that are small enough to be integrated directly inside many types of semiconductor process equipment. We believe that in several instances during the manufacturing process, our integrated approach offers considerable advantages over the conventional stand-alone approach to metrology control, enabling manufacturers using our integrated equipment to reduce costs and to improve production efficiency, yield and quality.

We have always emphasized our integrated metrology solutions as this continues to be an area where we have a leading position. In addition, in the past few years, we developed and started manufacturing stand-alone metrology systems, leveraging our technology, methods, metrology expertise and market position in the integrated metrology field to expand our offerings of stand-alone metrology systems. Over the past several years we developed several generations of Stand Alone metrology tools. Through a customer driven roadmap which aligns our development efforts with both R&D as well as high volume manufacturing needs of our customers, we have been able to build a differentiated product offering. The success of this endeavour has allowed us to grow this aspect of our business such that it now represents a significant part of our overall business. Today, both stand-alone and integrated metrology solutions have reached a level of maturity allowing semiconductor manufactures to choose how to use either technology and make decisions based on merit specific to the process step in question, always balancing between the amount of data attained and the use made of the data for capabilities such as automated process control. Our long-term strategy is focused on advanced metrology and process control solutions where our integrated process control products and stand-alone products are compatible or complementary and used in a customized way to meet specific customer needs.

Demand for metrology systems, whether integrated or stand-alone, is driven by capital equipment purchases by semiconductor manufacturers, which in turn are driven by worldwide demand for semiconductors. Industry data indicates that through the years, the worldwide demand for semiconductors is growing. We believe that this growth in demand will drive demand for process control equipment, including metrology systems, as semiconductor manufacturers add capacity. We also believe that the demand for metrology systems will also be driven by the increasing manufacturing costs of semiconductors and the demands of semiconductor manufacturers for process equipment that provides better film uniformity, shrinking process geometries resulting in increased dimensional control, tool-to-tool matching and within-tool uniformity.

Our Market

Semiconductor Industry and the Metrology Market

The increased use of semiconductors has been accompanied by an increase in their complexity. Due to the creation of new applications and markets for semiconductors, suppliers and manufacturers are faced with an increasing demand for new products that provide greater functionality and higher performance at lower prices. As a result, many new complex materials, structures and processes are being introduced to semiconductor manufacturing. New materials include copper, low-k and high-k dielectrics, silicon-on-insulator, silicon-germanium, strained silicon and raised source/drain. Manufacturers are also increasingly moving toward 300 mm silicon wafers from 200 mm silicon wafers. While 300 mm wafers can yield up to twice as many integrated circuits as 200 mm wafers, larger wafers increase manufacturing challenges. For example, because 300 mm wafers can bend or bow more than twice as much as 200 mm wafers, they are more susceptible to damage. The larger area of 300 mm wafers also makes it more difficult to maintain film uniformity across the entire wafer. Semiconductors also continue to move toward smaller feature sizes and more complex multi-level circuitry. The increase in complexity of semiconductors and the resulting increase in the complexity and cost of the semiconductor manufacturing process has also been a driver of demand for metrology systems.

The ever-increasing level of complexity and the decrease in feature sizes has also significantly increased the cost and performance requirements of semiconductor fabrication equipment. The cost of wafer fabrication equipment has also increased due to the higher levels of automation being utilized by manufacturers. Thus, semiconductor manufacturers must increase their investment in capital equipment in order to sustain technological leadership, to expand manufacturing capacity and maintain profitability. According to published reports by an industry market research firm, the cost of building a state-of-the-art semiconductor manufacturing facility has grown from approximately $200 million in 1983 to over $4 billion in 2011 for facilities capable of manufacturing 300 mm wafers. We believe that the process control equipment market, which includes the metrology segment, will grow in the future at a rate greater than the overall process equipment market since the challenges of meeting process design goals will become increasingly difficult such that process control equipment is in the future expected to consume a larger portion of the overall costs of semiconductor manufacturing equipment.

The Semiconductor Manufacturing Process

Semiconductors typically consist of transistors or other components connected by an intricate system of circuitry on flat silicon discs known as wafers. Integrated circuit manufacturing involves well over a dozen individual steps, some of which are repeated several times, through which numerous copies of an integrated circuit are formed on a single silicon wafer. Typically, up to 30 very thin patterned layers are created on each wafer during the manufacturing process. At the end of the manufacturing process, the wafer is cut into individual chips or dies. Because semiconductor specifications are extremely exacting, and integrated circuits are becoming more complex, requiring ever more sophisticated manufacturing processes, the process steps are constantly monitored, and critical parameters are measured at each step using metrology equipment.

Many of the manufacturing steps involve the controlled application or removal of layers of materials to or from the wafer. The application of materials to the wafer, known as deposition, involves the layering of extremely thin films of electrically insulating, conducting or semi-conducting materials. These layers can range from one-thousandth to less than one-hundred-thousandth of a millimeter in thickness and create electrically active regions on the wafer and its surface. A wide range of materials and deposition processes are used to build up thin film layers on wafers to achieve specific performance characteristics. One of the principal methods of thin film layer deposition is chemical vapor deposition (CVD). In CVD, a chemical is introduced into the chamber where the wafer is being processed and is deposited using heat and a chemical reaction to form a layer of solid material on the surface of the silicon wafer. Metrology systems monitor the thickness and uniformity of thin film layers during the deposition process.

Once the thin film has been deposited on the wafer to form a solid material, circuit patterns are created using a process known as photolithography. During this process, a light-sensitive coating called photoresist is applied to the wafer, which is then exposed to intense light through a patterned, opaque piece of glass. For the photolithography process to work properly, the thickness of the photoresist must be precise and uniform. In addition, to control the photolithography process, the film thickness, reflectivity, overlay registration and critical dimensions are all measured and verified. The exposed photoresist is developed when it is subjected to a chemical solution. The developed wafer is then exposed to another chemical solution, or plasma, that etches away any areas not covered by the photoresist to create the structure of the integrated circuit. Semiconductor manufacturers use metrology systems to verify the removal of material through the etch process and the critical dimensions of the structures created.

To meet the processing challenges posed by ever smaller feature sizes and because of the use of new materials such as copper in the manufacture of integrated circuits, manufacturers are increasingly using a process technology known as chemical mechanical polishing. Chemical mechanical polishing, or CMP, removes uneven film material deposited on the surface of the wafer from processes such as CVD and photolithography by carefully “sanding” the wafer with abrasives and chemicals, creating an extremely flat and even surface for the patterning of subsequent film layers. Metrology systems are used to control and verify the results of the CMP process by measuring the thin film layer to determine when the correct thickness has been achieved.

The processes described above are repeated in sequence until the last layer of structures on the wafer has been completed. Each integrated circuit on the wafer is then inspected and its functionality tested before shipment. Measurements taken by metrology systems during the manufacturing process help insure process uniformity and help semiconductor manufacturers avoid costly rework and mis-processing, thereby increasing efficiency and profitability.

The World Economy - Update

Global Insight, the analyst company, forecasts the world GDP to grow by 3.3% in 2012 compared to an increase of 2.9% in 2011, and forecasts the U.S. GDP to grow by 1.9% in 2012.

Analyst company Gartner forecasts semiconductor revenues to increase by 4.6% in 2012, compared to a decline of 0.1% in 2011. Gartner forecasts WFE sales in 2012 to decrease by 9.8% following a forecast increase of 9.4% in 2011.

According to research reports, future demand drivers for semiconductors include Tablet PC’s, Smartphones, Netbooks, Solid State Drives (SSD) and other electronic equipment.

The Need for Greater Overall Equipment Efficiency

We believe that one of the major challenges to achieving improvements in semiconductor manufacturing cost efficiency is continuously improving equipment productivity. Overall equipment efficiency, that is, the percentage of time that processing equipment is utilized to produce wafers, is used as a metric to quantify the productivity of a processing tool. The major factors affecting productivity are equipment downtime, qualification time, mis-processing and operator skills. We believe that in order to improve cost productivity, earn an acceptable return on their investment in capital equipment and to meet the demand for improved semiconductor device performance, semiconductor manufacturers must continuously find ways to improve overall equipment efficiency. It is therefore that we continuously ensure that our products offer cost efficient performance in their mode of operation. It is also our understanding that the use of metrology equipment that we manufacture enhances the cost efficiency of the process itself by offering high throughput, high reliability and low cost of operation making the metrology an inherent part of the process which does not cause any unnecessary delays.

Process Control. The steps used to create semiconductors are exacting processes that require strict control of equipment performance and process sequences for the resulting semiconductors to function properly. Tight control is achieved through monitoring of the in-process wafers and by measuring relevant parameters after each process step. These procedures are usually carried out on a small sample of the wafers though in some steps where process stability if difficult to achieve, the number of sampled wafers will increase. The monitoring may include measurement of several parameters, such as the thickness of the layers of thin film deposited, the sizes of the features that are patterned through the photolithography process, as well as the registration or alignment between two consecutive layers, known as overlay. Monitoring also includes inspection of the wafer for irregularities, defects or scratches. If parameters are out of specification or if defects or contamination are present, the manufacturer adjusts the process and measures another sample of wafers thereby allowing manufacturers to reduce costs and improve device performance.

The Need for Effective Process Control Tools. A number of technical and operational trends within the semiconductor manufacturing industry are strengthening the need for more effective process control solutions. These trends include:

- Development of Smaller Semiconductor Features. The development of smaller features, now as small as 28nm in production and 14nm in R&D, enables semiconductor manufacturers to produce larger numbers of circuits per wafer and to achieve higher circuit performance. As feature geometries decrease, manufacturing yields become increasingly sensitive to processing deviations and defects, as more integrated circuits are lost with every discarded wafer. In addition, the increased complexity and number of layers of the integrated circuits increase the chance of error during the manufacturing of the wafer.

- Shortening of Technology Life Cycles. The technology life cycle of integrated circuits continues to shorten as semiconductor manufacturers strive to adopt new processes that allow a faster transition to smaller, faster and more complex devices. In the past, the technology life cycle was approximately three years; it is now only two years. The accelerating rate of obsolescence of technology makes early achievement of enhanced productivity and high manufacturing yields an even more critical component of a semiconductor manufacturer's profitability and metrology continues to play an even more critical role in achieving these demanding results.

- Transition to Copper and other New Materials. Copper metal layers and other new materials such as low and high k-dielectrics and silicon on insulator are increasingly replacing aluminum for advanced integrated circuits in order to increase performance and reduce the cost of integrated circuits. Copper and low-K materials make it possible to build higher speed devices using fewer layers. The use of copper and other new materials requires new processing and metrology equipment and thus represents challenging developments for the semiconductor manufacturing industry.

- Transition to High-K Metal Gate. In order to overcome limitations in the continued shrink of transistor dimensions, leading edge integrated circuit manufacturers are introducing new materials in the transistor gate stack. The use of high-k dielectrics, combined with metal layers, requires new processing and metrology equipment and thus represents challenging developments for the semiconductor manufacturing industry.

- Increase in Foundry Manufacturing. As a result of the rising investment needed for semiconductor process development and production as well as the proliferation of different types of semiconductors, semiconductor manufacturing is increasingly being outsourced to large semiconductor contract manufacturers, or foundries. A foundry typically runs several different processes and makes hundreds to thousands of different semiconductor product types in one facility, making the maintenance of a constant high production yield and overall equipment efficiency more difficult to achieve. This trend of shifting to foundries for manufacturing needs has progressed even further during recent years.

- Increase in Automation. In an effort to achieve greater operating efficiencies, semiconductor manufacturers are increasingly relying upon automation. Automation represents the fastest growing segment of the semiconductor manufacturing industry.

In order to address the increasing costs associated with these trends, we believe semiconductor manufacturers must enhance manufacturing productivity. One way to enhance productivity is through improvements in process control, with a greater emphasis on metrology as part of process control. As part of this emphasis on metrology, manufacturers are taking more measurements to characterize each step of the semiconductor manufacturing process, new and enhanced measurement techniques are being used to provide meaningful data and the data provided is being used in new ways to enhance the manufacturing process. We believe that the demand for advanced process control systems that address the evolving needs of semiconductor manufacturers will continue to drive the growth in the market for process control systems.

We believe that in certain process steps, integrated metrology systems provide semiconductor manufacturers with the greatest opportunity to increase the productivity and yields of their equipment, thereby increasing their profitability. Therefore, we plan to continue to maintain a major focus on the integrated metrology market. However, recognizing that a significant number of process steps will continue to rely upon stand-alone equipment, we intend to continue leveraging our market leading position in the integrated metrology market and our metrology expertise to deepen our penetration of the stand-alone metrology market. Furthermore, the technological and operational trends within the semiconductor manufacturing industry that are strengthening the need for more effective process control solutions can sometimes be addressed through the use of stand-alone metrology equipment or a combination of both stand-alone and integrated metrology.

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Expected equipment spending in 2012

We believe that in 2012 equipment spending will be focused around three main areas:

1. Technology buys of equipment enabling semiconductor manufacturers to move to the next technology node maintaining competitiveness, reducing cost and improving product performance.

2. Expansion within not fully populated fab shells and initial population of new fabs.

3. Retrofits of equipment that will improve yield or efficiency, reduce overall manufacturing cost or enable using older process equipment for advanced technology nodes.

Metrology plays an important role in all of the above. We believe that we are well positioned for technology as well as expansion buys and retrofit opportunities with our newer stand-alone products, the NovaScan 3090Next, the Nova T500 and the Nova T600, and our state of the art integrated metrology products, the NovaScan 3090Next IM and the new generation Nova i500.

The Nova Approach

Integrated Metrology

Our integrated metrology systems provide semiconductor manufacturers with effective and efficient process control by measuring wafers and their properties without removing the wafer from the process equipment. All our products use our patented measuring methods that enable us to produce optical measuring systems that are small enough to be incorporated directly inside many types of equipment used in semiconductor processing. Integrated systems measure the wafer within the actual process environment, reducing labor and wafer handling as well as the risk of contamination of or damage to the wafer. In addition, we believe that our systems deliver significant increases in overall equipment efficiency through advanced process control, along with improving wafer-to-wafer uniformity, all with minimal operator intervention.

We provide our customers with flexible integrated process control solutions by offering systems that meet thin film as well as Optical CD measurement needs in critical applications in the fabrication process. Our integrated process control platform can be deployed to multiple processes and applications of semiconductor manufacturing.

Our systems can be installed directly in new equipment or used to upgrade existing equipment with minimal integration costs, extending the useful lifetime of existing process equipment and saving significant capital costs. To our knowledge, only our metrology systems can be used to retrofit older 200 mm semiconductor manufacturing equipment, giving us a unique opportunity as manufacturers seek to increase production quickly to meet the increasing demand for semiconductors. Our pioneering approach, centered on our NovaReady integration package, later adopted by process equipment manufacturers, allows process equipment manufacturers to prepare their equipment to accept our measurement systems, which can then be integrated with a simple plug-and-play installation.

We believe our integrated process control systems and solutions provide several important advantages to semiconductor manufacturers, enabling manufacturers to:

- utilize the process equipment wafer handling system to allow measurement of the sample wafers while processing other wafers and avoid the need for the costly additional wafer handling required by stand-alone metrology systems;

-

perform the measurements without removing the wafer from the process equipment, increasing the efficiency of the process and decreasing the risk of contamination;

- reduce manufacturing equipment processing variability through the use of wafer to wafer measurements and closed loop control based on automated feedback of process variability;
- reduce capital costs of the fabrication facility by increasing overall equipment efficiency and reducing labor costs and necessary clean room area;
- reduce the amount of time required to qualify process equipment that is usually idle during qualification steps, thus, minimizing costly equipment down-time;
- reduce the number of test wafers; and
- detect processing errors as early as possible.

We believe that as semiconductor manufacturers demand greater efficiency from their manufacturing equipment, process equipment manufacturers will increasingly seek to offer their customers integrated metrology in their tools to lower costs and increase overall efficiency. We believe the drive toward more efficient manufacturing operations in the face of increasing complexity will continue the trend of adopting integrated metrology solutions such as those we offer to multiple processes.

In prior years, most of our integrated metrology products were sold through process equipment manufacturers (such as Applied Materials, Inc. and Ebara Corporation). These products are later sold by the process equipment manufacturers to the semiconductor manufacturers. In recent years, we have made efforts to sell our integrated metrology products directly to the semiconductor manufacturers, in order to provide more favorable commercial terms to end users, OEM's and our Company as well as deepen our technological cooperation with the end users and expand our product offering through new, and previously unavailable, features and functionality. These efforts resulted in a significant shift towards direct sales of our integrated metrology products since 2009. We can not foresee the long-term impact of a move to direct sales, due to the competitive landscape and overall market conditions.

Stand-Alone Metrology

As stated above, we pioneered the area of integrated metrology and to-date revenues from that product continue to represent the larger portion of our overall revenues. With the adoption of our technology and the formation of long standing relationships with leading manufacturers, we have come to realize that our technology can be extended beyond integrated metrology into areas such as stand-alone metrology. Accordingly, in the past few years we developed stand-alone metrology tools to perform measurements similar to those performed by our integrated metrology tools. The expression "stand-alone metrology" generically describes free standing metrology equipment which sits inline, i.e., next to the processing equipment and receives cassettes or FOUPS of wafers to allow sampling of a few or several wafers from each cassette it receives. There are several types of stand-alone metrology tools each of which performs a distinct type of measurement, e.g., defect inspection, electrical performance, microscopic analysis, cross sections, etc. Our specific focus is in the area of optical CD measurement which is generally utilized in order to characterize critical dimensions on a wafer, their width, shape and profile. This technology is utilized today in several areas of the fab such as photolithography, etch, CMP, selective deposition of thin films, etc. The key advantage offered by this technique is that it provides visualization of the full cross-section-like profile of the structure, while remaining non-destructive and extremely fast with very high accuracy and repeatability. Adding stand alone metrology to our product portfolio has allowed us to expand our reach into areas of the fab that have been slower to adopt integrated metrology or such areas that can be properly controlled with a lower sampling scheme offered by a stand alone measurement tool.

We introduced this concept in 2006 and we were successful in penetrating several accounts through 2009, 2010 and 2011, allowing us to see a significant increase in our overall customer base with the stand-alone products. With the introduction of stand alone metrology, we have expanded our addressable markets and are now able to provide metrology solutions for four of the five critical manufacturing steps, as opposed to the one or two we were previously able to provide, when our product offering was limited.

Our Technology

We believe that our technological and engineering expertise and research and development capabilities allow us to develop and offer new products and technologies to meet the ever-changing demands of the semiconductor industry. We have applied our technological and engineering expertise to develop a wide range of integrated and stand-alone products for the dielectric CMP, copper CMP, Tungsten CMP, Etch and lithography processes as well as high end CVD deposited layers, Cu electroplating and sputtering of Cu barrier and seed materials. Because of our open architecture policy, our integrated metrology solutions can work with most models of CMP and Etch tools made by the major process equipment manufacturers, for both 200 mm and 300 mm applications.

Our scatterometry capabilities have enabled us to penetrate new customers with Stand-Alone Optical CD metrology systems. Our combined offering of advanced measurement hardware and advanced modeling software place us in a position to offer an advantageous solution to our customers.

In addition to the above applications, in 2012, we plan to introduce a standalone product for the emerging 3D-interconnect market. This internal development effort is based on an extension of our existing technologies.

Our suite of technological capabilities includes:

- Broadband Spectrophotometry. Our broadband Spectrophotometry capabilities range from deep ultraviolet to near infrared. This technology enables fast, accurate and small spot size film thickness measurement in a large range of applications on a very cost effective basis, both as an integrated system and as a stand-alone system.

- Scatterometry. Our Scatterometry systems are based on our broadband Spectrophotometry technology. These systems use a fully polarized deep ultraviolet to near-infrared spectral light source. This technology enables fast and cost effective system development. Scatterometry provides two and three dimensional characterization of very fine geometries on patterned product wafers. These profiling and critical dimension capabilities are key enablers of advanced process control, allowing almost real time metrology of the most advanced design rules, down to 14 nm and below. A key component in scatterometry technology is the modeling software which converts raw spectra coming from the measurement tool into useful information in terms of customer parameters. This segment of the technology is where we currently focus our attention and where we have also acquired specific advantages due to our unique solutions.

- Imaging and image processing. This technology has three different applications: (1) navigating on product wafers to perform measurements on very small selected sites; (2) detecting defects on product wafers after critical process steps, such as lithography and etch; and (3) measurement of the accuracy of registration between two layers (overlay measurement), mostly used in lithography.

The measurement techniques used in our metrology products are unique and protected by a number of patents.

Throughout our history, we have been a technological leader in the integrated metrology field. We were the first to offer integrated metrology solutions for semiconductor manufacturers and are the only provider of integrated metrology solutions that can measure wafers in water, which allows for more efficient and accurate metrology. Our systems have also been recognized by the industry: in 1998 we received the prestigious Editors' Choice Best Product Award from Semiconductor International magazine for our NovaScan 420 integrated thickness measurement tool for CMP process monitoring, in 2004 we received the award for our NovaScan 2020Cu and 3030Cu for Copper CMP process monitoring, in 2007 we received the award for our NovaScan 3090CD for thin-film metrology of dielectric CMP and copper applications, CD control and shape profiling and in 2009 we received this award for NovaMARS modeling SW.

Products

Our products include metrology systems for thin film measurement in chemical mechanical polishing and chemical vapor deposition applications; optical CD and Metal Line Thickness (MLT) systems for use in post-copper chemical mechanical polishing applications and optical critical dimension systems for lithography and etch applications. Our integrated thickness monitoring system for chemical mechanical polishing process control enables wafer-to-wafer closed loop control. We offer several models of integrated thickness monitoring systems, depending on polisher type and end-user requirements. These metrology systems address a broad range of metrology requirements of our end-user and process equipment manufacturer customers. Both our integrated and stand-alone systems incorporate patented optical scanning, dynamic auto-focus, unique pattern recognition for arbitrarily oriented wafers and proprietary algorithms for in-water measuring of two layers simultaneously. We offer several different product models that are tailored to conventional chemical mechanical polishing equipment as well as to newer, high throughput polishers. Following is a summary of our products:

Thin Film Process Control

- The NovaScan 2040 is the second generation of integrated thickness monitoring systems with enhanced spectral range, responding to the needs of the industry for emerging chemical mechanical polishing high-end applications of thin films and complex layer stacks. The 2040 model was introduced to the market at the end of 2000, and since then has replaced the NovaScan 840 and accounted for the majority of our sales for 200 mm production lines since then.

- The NovaScan 2020Cu has the same basic platform as the NovaScan 2040, with additional hardware and software improvements, enabling the system to answer the unique requirements of copper chemical mechanical polishing monitoring. The system was introduced to the market at the beginning of 2003.

- The NovaScan 3090Next is currently our main product. Targeted at 45nm and 32nm technology nodes this tool was released in 2006 and provided significant improvements in throughput, accuracy, tool to tool matching and spectral range over the older NovaScan 3090. It also improved overall tool reliability. The NovaScan 3090Next is available as integrated metrology and as stand-alone metrology systems for both thin film and Optical CD (scatterometry) applications.

- The Nova T500 stand-alone product family, targeted at technology nodes ranging from 32nm and smaller. The Nova T500 features improved metrology performance, improving both accuracy and tool to tool matching, providing industry leading throughput of 250WPH.

- The new generation Nova i500 integrated metrology features the same metrology as the Nova T500 for complete stand-alone to integrated metrology compatibility. The Nova i500 features advanced metrology for technology nodes smaller than 32nm and high throughput that meets the standards of next generation polishers.

- The Nova T600 is the latest edition to the stand-alone product family, targeted at technology nodes of 2x and beyond. The Nova T600 features multi-channel reflectometry configuration that is optimized for best sensitivity on small features and critical device parameters. Nova T600 is designed to meet the challenging cost of ownership requirements of semiconductor customers, achieved through a combination of high throughput, Modular Metrology, and the flexibility to optimize optical configuration and tool type to best serve application needs.

- NovaMars is an advanced scatterometry modeling and application development software tool enabling complex 2D, 3D and in-die measurements. Process engineers can harness the power and flexibility of the tool to develop their own scatterometry applications by themselves thus keeping the details of their process within the fab. Its user interface and high level of automation provide for easier and faster application development and eliminate discrepancies between different developers, enabling the best solution, independent of user proficiency. The NovaMars is offered as an option together with the 3090, 3090Next, Nova T500 and Nova i500 product families.

- A closed loop control option for the NovaScan systems delivers reliable, highly automated wafer-to-wafer uniformity over chemical mechanical polishing manufacturing processes. The thickness data of every processed wafer is obtained and process parameters are fed back to adjust the next wafer polish.

- NovaNet is a highly sophisticated computer network, connecting all NovaScan systems on a factory floor. The network is managed by a dedicated server, running with proprietary software developed by Nova, and insuring safe recipe distribution and recipe integrity across the factory. The NovaNet also includes a report generator (NSA) that allows the creation of reports from all the systems connected and allows programmable cross sections.

- NovaHPC (High Power Computer) supports the NovaMars Application Development Tool and enables effective and timely calculations of attained spectra. Scalable and user configurable infrastructure with Nova's proprietary task management software addresses the growing needs of IC manufacturing metrology. NovaHPC is just one of the few solutions available for cost effectiveness and computation power growth flexibility. The stand-alone modular rack includes:

  - HPC

    § TurboHPC

- Grid computing connectivity enabled
- Web-based management SW

NovaHPC Value-Added Benefits include: accelerated recipe set-up library building, Scalable infrastructure, invest as you grow and Low-cost entry level using grid computing with existing computation resources.

While we continue to emphasize our integrated metrology solutions, we offer our products as stand-alone equipment as well, thereby significantly expanding our potential available markets. While we have succeeded in penetrations of stand-alone metrology, our revenues remain substantially dependent on sales of our CMP integrated metrology product line.

Research and Development

We have assembled a core team of experienced scientists and engineers who are highly skilled in their particular field or discipline. Our research and development core competencies, technologies and disciplines are in scatterometry, thin film metrology, and include measurement instruments, optical modeling, image acquisition, pattern recognition, equipment integration and fab automation. Our research and development staff consists of about 100 highly skilled members, over 30 of which hold PhDs. In addition, we rely on independent subcontractors and consultants in various fields. Since June 2003, our research and development operations are certified as ISO9001/2000 quality standard.

The metrology and process control market is characterized by continuous technological development and product innovations. We believe that the rapid and ongoing development of new products and enhancements to our existing product lines is critical to our success. Accordingly, we devote a significant portion of our technical, management and financial resources to developing new applications and emerging technologies. In 2009, 2010 and 2011, our research and development expenses, net of participation by the Office of the Chief Scientist of the Ministry of Industry, Trade and Labor, were $6.9 million, $12.4 million and $18.7 million respectively, representing, 17.4%, 14.4% and 18.2% of our respective total revenues for those years. The significant increase of R&D expenditures in 2011 represents our strategic choice to increase our market share in the growing Optical CD market as well as to develop new products beyond our existing fields. In the future, we plan to continue and expand our R&D investments in this area.

Our vision is to continue to be a market leader in the semiconductor process control market and become the leader in the stand-alone Optical CD metrology market, and our research and development efforts and activities are designed to support this vision. Our research and development policy is based on a structured process of initiating new projects and on-going review of existing development projects. Project initiation is based on a detailed project plan, risk and market analysis. Each project is monitored throughout its life cycle in a structured process, including design reviews and project management reviews. In the frame of our research and development activities we consider from time to time, and are currently considering, entering into intellectual property consortium arrangements.

Intellectual Property

Our success depends in part upon our ability to protect our intellectual property. We therefore have an extensive program devoted to seeking patent protection for our inventions and discoveries that we believe will provide us with competitive advantages. As of March 1, 2012, our portfolio includes 95 U.S. patents and approximately 46 non-U.S. patents. The U.S. patents we hold have expiration dates ranging from 2014 to 2025. We also have 19 U.S. patent applications pending and 30 applications pending in other countries including 6 PCT applications. Our patents and applications principally cover various aspects of optical measurement systems and methods, integrated process control implementation concepts, and optical, opto-mechanical and mechanical design. We have also registered 4 trademarks in the U.S. and 10 registered trademarks in countries other than the U.S.

To protect our proprietary rights, we also rely on a combination of copyrights, trademarks, trade secret laws, contractual provisions and licenses. Our copyrights include software copyrights. We also enter into confidentiality agreements with our employees and some of our consultants, business partners and customers, and seek to control access to and distribution of our proprietary information, such as our proprietary algorithms.

While we attempt to protect our intellectual property through patents, copyrights and non-disclosure and confidentiality agreements, we may not be able to adequately protect our technology. Competitors may be able to develop similar technology independently or design around our patents and, despite our efforts, our trade secrets may be disclosed to others. Furthermore, the laws of countries other than the U.S. may not protect our intellectual property to the same extent as the laws in the U.S. We also cannot assure that: (i) our pending patent applications will be approved; (ii) any patents granted will be broad enough to protect our technology or provide us with competitive advantages or will not be successfully challenged or invalidated by third parties; or (iii) that the patents of others will not have an adverse effect on our ability to do business. We may also have to commence legal proceedings against third parties to protect our intellectual property, as we have done recently.

From time to time, we receive communications from others asserting that our products infringe or may infringe their intellectual property rights. Typically, our in-house patent counsel investigates these matters and, where appropriate, retains outside counsel to provide assistance. We are not presently involved in any material legal proceedings in which a third party has asserted that we have violated their intellectual property rights. If, however, we become involved in any such litigation and its outcome is adverse to us, it may result in a loss of proprietary rights, subject us to significant liabilities, including treble damages in some instances, require us to seek licenses from third parties which may not be available on reasonable terms or at all, or prevent us from selling our products. Furthermore, any litigation relating to intellectual property, even if we are ultimately successful, could result in substantial costs and diversion of time and effort by our management. This in and of itself could have a negative impact on us.

While we believe that we would be successful in any litigation seeking to enforce our patent rights, the ultimate outcome of any litigation or other legal proceedings cannot be predicted.

In September 2006, we invited companies to submit bids to license or buy some of our patents. These patents have substantial value because the industry is on the threshold of widespread adoption of integrated metrology and the methods covered by the patents are critical for advanced manufacturing of semiconductors. We were pioneering the use of an auction model to set a market price for patent licenses by offering to the highest bidder licenses for six of our patents pertaining to the use of a lithography tool with integrated metrology in semiconductor processing lines. Participants in the auction also had the option to bid for full ownership of the patents, which represent only a small portion of Nova’s extensive patent portfolio.

In July 13, 2007, Nova reached an agreement to license the patents to a large semiconductor manufacturer for a total consideration of more than $1.0 million.

In addition to the successful monetizing of some our patents in 2007 by non-exclusive licensing to a large semiconductor manufacturer for more than $1.0 million, in June 2009 we initiated another intellectual property monetizing project, by offering several relevant companies to license or acquire an extended number of our patents. Although initial contact with potential customers had been made, our efforts did not yield a definitive transaction, in part due to the deep downturn the whole intellectual property monetizing market has been experiencing. As a result, as of December 2010 we have formally terminated this process. For additional information regarding our intellectual property, see “— Our Technology” in this annual report on Form 20-F.

Our Customers, Sales and Marketing

Our two pronged, integrated sales and marketing strategy involves marketing our products directly to semiconductor manufacturers in addition to process equipment manufacturers in order to create demand for our products. We believe that the pricing structure of our NovaReady integration package enables process equipment manufacturers to increase their margins, and that the features and benefits of our systems can improve equipment yields, overall equipment efficiency and increase productivity, creating an incentive for process equipment manufacturers to promote our products to semiconductor manufacturers. At the same time, we believe that semiconductor manufacturers, eager to improve their own margins through increased factory throughput and yield improvements, will demand that the equipment they employ incorporate or use metrology systems such as those we manufacture. We believe that by marketing directly to end users as well as to process equipment manufacturers, we are able to ensure that both parties are aware of the wide range of benefits that our products can deliver, and that we are able to continuously enhance our products with functionality demanded by these two distinct types of customers.

To further enhance our marketing efforts, we have established a system of integrated sales and support activities with key process equipment manufacturers. This allows us to provide comprehensive and long-term application support directly to semiconductor manufacturers and ensure that our products are combined into our partners’ next generation equipment sets as those become available. We expect to continue to add new process equipment manufacturers as partners as we introduce new integrated process control systems that can be integrated with different types of equipment.

We also seek to establish and maintain close and mutually beneficial relationships with our customers by consistently providing them with a high level of service, support and new capabilities. We have established a global network of direct sales and marketing, customer service and applications support offices. We maintain sales, service or applications offices in Europe, Israel, Japan, Korea, Singapore, Taiwan, China and the U.S., with a total staff of 122 people. These offices provide highly qualified application support specialists, training to process equipment manufacturer customers and end users, marketing, demonstrations and evaluations, spare parts hubs and sales and support engineers.

We serve all sectors of the integrated circuit manufacturing industry including logic, ASIC, foundries and memory manufactures. Our end user and process equipment manufacturer customers are located in different countries, including Japan, Korea, Singapore, Taiwan, China the U.S. and various European countries.

The table below describes the distribution of our total revenues, from systems and services, according to the geographic location of the actual installation of our systems in end-user sites:

	Year ended December 31,		
	2009	2010	2011
		(in thousands)	
U.S.	$ 5,713	$ 14,373	$ 20,230
Europe	1,288	2,409	7,818
Japan	4,880	3,378	3,372
Asia-Pacific (excluding Japan)	27,437	66,460	71,408
Total	$ 39,318	$ 86,620	$ 102,828

The semiconductor industry is dominated by a small number of large companies. As a result, while our overall customer base is diverse, our sales are highly concentrated among a relatively small number of customers. The following table indicates the percentage of our total revenues derived from sales to our five largest customers and the range of these revenues from these customers for the periods indicated.

	Year ended December 31,		
	2009	2010	2011
Total revenues from five largest customers	82%	78%	58%
Range of revenues from five largest customers	4%-46%	8%-24%	6%-29%

We anticipate that our revenues will continue to depend on a limited number of major customers, although the companies considered to be our major customers and the percentage of our revenue represented by each major customer may vary from year to year. As our customer base is highly concentrated, if any of our customers becomes insolvent or has difficulties meeting its financial obligations to us, we may suffer losses that may be material in amount. A loss of any of our major customers may likewise cause us to suffer a material decrease in sales and revenue.

The highly competitive nature of the market for semiconductor capital equipment affects our ability to successfully implement our marketing and sales efforts. Competitive factors in the market for integrated process control systems include technological leadership, system performance, ease of use, reliability, cost of ownership, technical support and customer relationships. For integrated process control, an adequate business model, internal organization and unique process equipment manufacturer agreements and partnerships are also significant factors. We believe we compete favorably on the basis of these factors in the markets we serve.

Our current integrated metrology products primarily compete with products manufactured by Nanometrics. We have gained market share with the successful launch of NovaScan 3090 platform but we expect our integrated products to face intense competition in the coming years. In the stand alone metrology field, we face intense competition in, from both Nanometrics and KLA-Tencor. We also compete against companies manufacturing other types of equipment as a result of the disruptive nature of the technology we offer. These companies include Hitachi hi-tech and Applied Materials in the area of CD-SEM and Rudolph Technologies in the area of acoustic measurement of copper lines.

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Manufacturing

In order to leverage the relatively high volume of integrated and stand-alone systems we manufacture, and in order to decrease production costs, we continue to focus our internal manufacturing activities on processes that add significant value or require unique technology or specialized knowledge and outsource others. Our manufacturing operations received the ISO 9001 quality mark by an international certification institute in October 1999. Since then, we have upgraded our quality systems to conform to ISO 9001/2008 requirements. In 2010, we received the formal certification of ISO 14001:2004.

Our principal manufacturing activities include assembly, integration, final testing and calibration. Our production activities are conducted in our manufacturing and Repair Center facility in Israel. We rely and expect to continue to rely on subcontractors and turnkey suppliers to fabricate components, build subassemblies and perform other non-core activities in a cost-effective manner. While we use standard components and subassemblies wherever possible, most mechanical parts, metal fabrications, optical components and other critical components used in our products are engineered and manufactured to our specifications. A small portion of these components and subassemblies are obtained from a limited group of suppliers, and occasionally from a single source supplier.

We have our own manufacturing facility, which is located in Ness-Ziona, Israel, divided into two buildings. Any event affecting this facility, including natural disaster, labor stoppages or armed conflict, may disrupt or indefinitely discontinue our manufacturing capabilities and could significantly impair our ability to fulfill orders and generate revenues.

Capital Expenditures

Our capital expenditures are primarily for network infrastructure, computer hardware and software, leasehold improvements of our facilities and system demonstration and development tools. None of these assets are held as collateral or guarantee other obligations. For additional information on our capital expenditures, see “Item 5B. Liquidity and Capital Resources” in this annual report on Form 20-F.

Political and Economic Conditions in Israel

We are incorporated under the laws of the State of Israel, and our principal offices and manufacturing facilities are located in Israel. We are, therefore, directly influenced by the political, economic and military conditions affecting Israel. Any major hostilities involving Israel, the interruption or curtailment of trade between Israel and its trading partners or a significant downturn in the economic or financial condition of Israel could have a material adverse effect on our business, financial condition and results of operations. Additionally, many of our male employees in Israel are currently obligated to perform annual reserve duty in the Israel Defense Force and virtually all such employees are subject to being called to active duty at any time under emergency circumstances. While we have operated effectively under these requirements since we began our operations, no assessment can be made as to the full impact of such requirements on our workforce or business if conditions should change, and no prediction can be made as to the effect of the expansion or reduction of such obligations.

Government Regulation

For information relating to the impact of certain government regulations on our business, see “Item 5C –Grants from the Office of the Chief Scientist” on this annual report on Form 20-F.

4.C Organizational Structure

Our Subsidiaries

Our subsidiaries and the countries of their incorporation are as follows. All of our subsidiaries are wholly owned by the Company:

Name of Subsidiary	Country of Incorporation
Nova Measuring Instruments Inc.	Delaware, U.S.
Nova Measuring Instruments K.K.	Japan
Nova Measuring Instruments Taiwan Ltd.	Taiwan
Nova Measuring Instruments Netherlands B.V.	Netherlands
Nova Measuring Instruments Korea Ltd.	Korea

4.D Property, Plant and Equipment

Our main facilities, located in Ness-Ziona, Israel, occupy approximately 6,100 square meters, including: approximately 1,200 square meters of production facilities, approximately 3,600 square meters of research and development offices (including approximately 400 square meters of laboratories) and approximately 1,200 square meters of headquarters, sales and marketing, service and support and administration facilities. Our current lease commitment relating to our facilities in Israel expires at the end of January 2013.

Our subsidiaries lease offices in various locations, for use as a service and pre-sale facility. Our U.S. subsidiary leases approximately 300 square meters, our Japanese subsidiary leases approximately 200 square meters, our Taiwanese subsidiary leases approximately 400 square meters and our Korean subsidiary leases approximately 175 square meters.

We believe that our facilities and equipment are in good operating condition and adequate for their present usage.

Item 4A. Unresolved Staff Comments

None.

Item 5. Operating and Financial Review and Prospects

Information in this Operating Review and Financial Prospects Section should be read in conjunction with our consolidated financial statements and notes thereto which are included elsewhere in this report.

Executive Overview

We are a worldwide leading designer, developer and producer of integrated metrology systems for the semiconductor manufacturing industry and a leading designer, developer and producer of stand-alone metrology systems for the semiconductor industry. Our metrology systems are used to take precise measurements of semiconductors during the manufacturing process to control the manufacturing process and increase the productivity of the manufacturing equipment. We market and sell our metrology systems to semiconductor process equipment manufacturers and directly to semiconductor manufacturers.

Our business is greatly affected by the level of spending on capital equipment by semiconductor manufacturers. Capital expenditures by semiconductor manufacturers tend to be cyclical in nature and depend on numerous factors, many of which are beyond our control. Factors affecting the semiconductor industry, which are beyond our control, include general economic conditions throughout the world and the demand and perceived demand for semiconductors. In addition, demand for our products and services is affected by the timing of new product announcements and releases by us and our competitors, market acceptance of our new or enhanced products and changes or advances in semiconductor design or manufacturing processes.

In the recent five years (2007-2011), we were able to present Cumulative Annual Growth Rate (CAGR) of approximately 17%, while WFE experienced CAGR of 7%. We believe that this improved performance is attributed mainly to our focus on high growth segments of metrology and Optical CD and to our move to a direct sales business model. Industry forecasts indicate flat to modest increase in WFE spending in the next two years, and we believe we are well positioned to continue to grow as we continue our focus on high growth segments within the industry.

We derive our revenues principally from sales of our metrology systems and services relating to our systems. In 2011, product sales accounted for 83% of our total revenues and services accounted for 17%. Presently, we have no significant long-term debt, and during 2011 we increased our overall cash reserves by $25.5 million, through generating positive cash flow from operating activities. As of the end of 2011, we had overall cash reserves of $87.1 million and working capital of $94.6 million.

Our service organization is operated on a profit and loss basis and is measured as a cost center in each territory and on a global basis. The objectives of our service organization are defined and measured by: customer satisfaction; quality parameters, such as time to repair and mean time between failures; and by profit and loss criteria. The service organization provides support to all products we sell, during both the warranty period and the post warranty period.

When evaluating the performance of the Company, our management tends to focus on several financial metrics and qualitative areas, including market share, gross margins, operating margins, inventory turns and days sales outstanding. Blended gross margins in 2011 were approximately 56.4%, while product sales presented gross margins of approximately 61% and services presented gross margins of approximately 36%. Our average inventory levels in 2011 were approximately 11% of annual sales. In 2011, average daily sales outstanding for total revenues were 55 and ranged between 40 and 64 days over the four quarters of 2011.

Significant Events in 2011 and Outlook for 2012

The year 2011 had several significant events:

- Crossing the $100 million revenues mark with record net income.
- Extending the proliferation of our stand alone metrology products into several accounts that we penetrated during 2010.
- Successful multiple penetrations into very high end technology nodes that are two generations ahead of current manufacturing technologies.
  - More than 70% of revenues during 2011 coming from technology nodes below 30nm.
- Successful launch of Next Generation products for integrated and stand alone metrology:
  - NovaT600 – selected for 11nm/14nm/20nm technology nodes at multiple foundry accounts.
  - Nova i500 – selected for 11nm/14nm/20nm/30nm technology nodes at multiple memory and foundry accounts
- Introduction of new versions of our MARS modeling SW to continue and improve our competitive position.
- Beta shipment of our new product for the 3-D interconnect market to a leading foundry.
- Several joint publications with technology leading customers at industry symposiums.
- Establishment of a subsidiary in Korea to support our growing activities in that region.

In 2012, Nova plans to focus on the following:

- Collaborations and joint research with leading semiconductor manufacturers and relevant leading research institutes.
- Development, and in some cases, introduction of new generations of our current products as well as new products, to address the advancing technology trends toward feature sizes of 11 nm and below as well as new processes and materials such as 3-D interconnect, 3-D gate structures and the transition to 450mm wafer sizes. Some of these activities will result in new product launches during 2012 while others will come at later stages per our understanding of the industry’s technology roadmap as communicated by our key customers.
- Addition of necessary infrastructure to support our multi-year growth plans.
- Continuing the maturation of our recently launched products

- Leveraging the increased need for monitoring and controlling which results from decreasing feature sizes, and the accelerated move to new materials.

The challenges and risks we face in meeting our plans include:

- On time delivery of “the right” process control solutions to meet the needs of our existing and new customers.

- Correctly understanding the market trends and competitive landscape to ensure our products retain proper differentiation to win customer confidence.

- Creating aggressive and competitive roadmap deliverables at reasonable costs in order to properly control expenses.

In order to address these risks and challenges, we are working closely with leading customers' process development groups and with the leading process equipment manufacturers as well as with leading technology research institutes. The purpose of working closely with these entities is to receive from them as early as possible information and feedback on their current and future metrology and process control needs and tune the roadmap to support such needs.

During 2011 our revenues continued to increase as a result of a combination of market share gains, the addition of metrology steps that are controlled by the technology that we offer as well as a continued improvement in overall market conditions in the wafer fab equipment sector. During 2011 the portion of our overall revenues coming from stand alone metrology tools significantly increased.

On the integrated metrology front, most of our revenues continue to come from CMP applications. During 2011 we began to see increased interest in the adoption of integrated metrology for high end Etching steps. We believe this trend will gain momentum as the industry moves to technology nodes below 20nm and the ability of etch tool manufacturers to meet process specifications at critical layers is challenged, requiring them to look for onboard process control solutions, in approaching this business opportunity we intend to rely heavily on the excellent technological collaborations and partnerships we have built over the years with two of the largest OEM's in the area of etching.

We expect the adoption of stand alone Optical CD metrology for process control of the etch, lithography and high end CVD process steps to increase in conjunction with the continued design rule shrinks as the need for non destructive 3D measurements continues to grow.

Critical Accounting Policies

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principals generally accepted in the United States of America. We believe the following critical accounting policies, among others, affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

Use of Estimates – General

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Revenue Recognition

We recognize revenues from the sale of products when all the following criteria have been met: a persuasive evidence of an arrangement exists, delivery has occurred, the price is fixed or determinable, collection of resulting receivables is probable and there are no remaining significant obligations.

On January 1, 2011, we adopted the Financial Accounting Standards Board ASU No. 2009-13, "Revenue Recognition (Topic 605) Multiple-Deliverable Revenue Arrangements". For transactions occurring on or after January 1, 2011 containing multiple elements, revenue is recognized upon delivery of the separate elements, based on their relative fair value. The Company determines the selling price using vendor specific objective evidence ("VSOE"), if it exists, and otherwise uses estimated selling price ("ESP"). Third Party Evidence ("TPE") is not typically used to determine selling prices as to limited availability of reliable competitor products' selling prices. The ESP is established considering multiple factors including, but not limited to, gross margin objectives, pricing strategies, internal costs and other economic conditions. The adoption of this standard did not have a material impact on our Consolidated Results of Operations and Financial Condition.

Service contracts generally specify fixed payment amounts for periods longer than one month, and are recognized on a straight line basis over the term of the contract.

Allowances for Doubtful Accounts

We review on an on-going basis the need for allowances for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. When determining what allowance, if any, to make for doubtful accounts, we review many factors, including our history of relatively few write-offs, customer relationships and customers' creditworthiness. Based on this review, we estimate the amount of accounts receivable, if any, we may be unable to collect and allowances for doubtful accounts may be required. If the financial condition of our customers were to deteriorate, their ability to make payments could be impaired and our estimates could prove to be inaccurate. If significant, allowances for doubtful accounts could have a material adverse effect on our financial results.

Warranty Provisions

We provide for the estimated cost of product warranties at the time revenue is recognized. While we are engaged in extensive product quality programs and processes, including actively monitoring and evaluating the quality of our component suppliers, our warranty obligations are affected by product failure rates, material usage and service delivery costs incurred in correcting product failures at our locations or at customer sites. Should actual product failure rates, material usage or service delivery costs differ from our estimates, revisions to the estimated warranty liability may be required.

Inventories Write-Off

We carry our inventory at the lower of either the actual cost or the current estimated market value of the inventory. We regularly review inventory quantities on hand and record a provision for excess and obsolete inventory based primarily on our estimated forecast of product demand and production requirements for the next twelve months. As demonstrated during 2008, demand for our products can fluctuate significantly. A significant increase in the demand for our products could result in a short-term increase in inventory purchases while a significant decrease in demand could result in an increase in the amount of excess inventory quantities on hand, which could lead to losses. In addition, our industry is characterized by rapid technological change, frequent new product developments, and rapid product obsolescence that could result in an increase in the amount of obsolete inventory quantities on hand. Additionally, our estimates of future product demand may prove to be inaccurate, in which case we may have understated or overstated the provision required for excess and obsolete inventory. In the future, if our inventory is determined to be overvalued, we would be required to recognize such costs in our cost of goods sold at the time of such determination. Likewise, if our inventory is determined to be undervalued, we may have over-reported our costs of goods sold in previous periods and would be required to recognize such additional operating income at the time of sale. Therefore, although we make every effort to ensure the accuracy of our forecasts of future product demand, any significant unanticipated changes in demand or technological developments could have a significant impact on the value of our inventory and our reported operating results.

For a discussion of other significant accounting policies used in the preparation of our financial statements and recent accounting pronouncements, see Note 2 to our consolidated financial statements contained elsewhere in this report.

5.A Operating Results

Overview

The table below describes the distribution of our total revenues, from systems and services, by geographic areas of our product installations at semiconductor manufacturing facilities. As our customers include both semiconductor manufacturers and process equipment manufacturers, this distribution is different from the distribution of our revenues by customer location discussed in the immediately preceding paragraph.

	2009		2010		2011	
USA	15	%	16	%	20	%
Europe	3	%	3	%	8	%
Japan	12	%	4	%	3	%
Asia-Pacific (excluding Japan)	70	%	77	%	69	%
Total	100	%	100	%	100	%

Historically, a substantial portion of our revenues has come from a small number of customers. In 2009, 2010 and 2011 our five largest customers accounted for 82%, 78% and 59% of our revenues, respectively. In 2009, 2010 and

2011 our single largest customer accounted for 46%, 24% and 29% of our revenues, respectively. We anticipate that our revenues will continue to depend on a limited number of major customers, although the companies considered being major customers and the percentage of our revenue represented by each major customer may vary from period to period. Therefore, the loss of any one of our major customers could materially and adversely affect us.

The sales cycle for our systems typically ranges from 6 to 12 months and depends upon the status of our system's integration with a particular manufacture and model of process equipment, the evaluation criteria of our customers, and the technology or application of the process. Additionally, the rate and timing of customer orders may vary significantly from month to month as a function of the specific timing of fab expansions. Accordingly, if sales of our products do not occur when we expect or we are unable to adjust our estimates on a timely basis, our expenses and inventory levels may fluctuate relative to revenues and total assets. In 2011, our inventory levels at the end of each quarter ranged from $9.6 million to $13.6 million. We planned our 2011 inventories under the assumption that the NovaScan 3090Next would account for most of our product sales. Actual sales in 2011 were similar to this plan. In 2012, we anticipate that the NovaScan 3090 Next product will continue to account for the majority of our product sales, yet we expect to see larger scale proliferation of the new T500 and i500 products.

We schedule production of our systems based upon order backlog and customer forecasts. We include in backlog only those orders to which the customer has assigned a purchase order number and for which delivery has been specified.

Our revenues increased by 19% in 2011 following a 120% and 1% increase in 2010 and 2009, respectively.

The following table shows the relationship, expressed as a percentage, of the listed items from our consolidated statements of operations to our total revenues for the periods indicated:

	Percentage of Total Revenues Year ended December 31,					
	2009		2010		2011	
Revenues from product sales	75.4	%	82.9	%	83.2	%
Revenues from services	24.6	%	17.1	%	16.8	%
Total revenues	100.0	%	100	%	100	%
Cost of products sale	32.4	%	33.5	%	32.9	%
Cost of services	22.9	%	11.7	%	10.7	%
Total cost of revenues	55.3	%	45.3	%	43.6	%
Gross profit	44.7	%	54.7	%	56.4	%
Operating expenses:						
Research and development expenses, net	17.4	%	14.4	%	18.2	%
Sales and marketing expenses	15.3	%	11.7	%	11.1	%
General and administrative expenses	5.7	%	3.4	%	3.1	%
Total operating expenses	38.4	%	29.5	%	32.4	%
Operating profit (loss)	6.3	%	25.2	%	24	%
Financing income (expenses), net	0.4	%	0.4	%	0.9	%
Income before income taxes	6.7	%	25.6	%	24.9	%
Benefit from deferred income taxes	-		-		2.4	%

Net income (loss)	6.7	%	25.6	%	27.3	%

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Comparison of Years Ended December 31, 2011 and 2010

Revenues. Our revenues in 2011 increased by $16.2 million, or 18.7%, compared to 2010, with revenues attributable to product sales accounting for $85.6 million, an increase of $13.8 million, or 19.2%, compared to 2010, and revenues attributable to services accounting for $17.3 million, an increase of $2.4 million, or 16.4%, compared to 2010. The increase in product sales revenue in 2011 was attributed to a combination of the growth in capital spending throughout the industry during the first half of the year and successful customer penetrations generating repeat orders. The increase in services revenues is attributed mainly to the increase in our products' install base and the related sales of parts and repair.

Cost of Revenues and Gross Profit. Cost of revenues consists of labor, material and overhead costs of manufacturing our systems, and the costs associated with our worldwide service and support infrastructure. It also consists of inventory write-offs and provisions for estimated future warranty costs for systems we have sold. Our cost of revenues attributable to product sales in 2011 was $33.8 million, an increase of $4.7 million, or 16.3%, compared to 2010. Our cost of revenues attributable to product sales, as a percentage of product revenues in 2011, was 39.5%, compared to 40.5% in 2010. Our gross margin attributable to product revenues in 2011 was 60.5%, compared to 59.5% in 2010. This increase in gross margins in 2011 is mainly related to the overall increase in sales volume utilizing an already existing infrastructure combined with higher margin products sales.

Our cost of revenues attributable to services in 2011 was $11.0 million, an increase of $0.9 million, or 8.8%, compared to 2010. This increase is mainly attributable to the increase in headcount. Our gross margin attributable to services revenues in 2011 was 36%, compared to 31.6% in 2010 as a result of higher revenues utilizing an already existing infrastructure.

Our overall gross profit increased by 22.3% to $58.0 million in 2011, compared to $47.4 million in 2010. Our overall gross margin was 56.4% and 54.7% of our total revenues in 2011 and 2010, respectively. The increase in overall gross margins in year 2011 is mainly attributable to the increase in revenues resulting from the overall growth in semiconductors equipment market, to the sale of higher margin products and to the increase in sales of service parts and repairs.

Research and Development Expenses, Net. Research and development expenses, net, consist primarily of salaries and related expenses and also include consulting fees, subcontracting costs, related materials and overhead expenses, after offsetting grants received or receivable from the Office of the Chief Scientist. Our net research and development expenses increased by 50.1% to $18.7 million in 2011, compared to $12.5 million in 2010, after offsetting grants received or receivable from the Office of the Chief Scientist of $2.2 million in each of the years 2011 and 2010. In 2011, net research and development expenses represented 18.2% of our revenues compared to 14.4% of our revenues in 2010. This increase in research and development expenses is mainly attributed to the continuous increase in headcount to support our products roadmap and to the increase in materials expenditures for building new products prototypes during 2011.

Approximately 50% of our net research and development expenses in 2011 resulted from our research and development efforts relating to current products and product lines, and the rest were related to developing a technology infrastructure for next generation metrology tools platforms, mainly for stand-alone metrology products.

Sales and Marketing. Sales and marketing expenses are mainly comprised of salaries and related costs for sales and marketing personnel, travel related expenses and overhead. They also include commissions to our representatives and sales personnel and royalties. Our sales and marketing expenses increased by 12.2 % to $11.4 million in 2011, compared to $10.1 million in 2010. The increase in sales and marketing expenses is mainly attributed to the increase in headcount during 2011. Sales and marketing expenses represented 11.1% and 11.7% of our revenues in 2011 and

2010, respectively. The decrease as a percentage of revenue is mainly related to the increase in revenues in 2011.

General and Administrative. General and administrative expenses are comprised of salaries and related expenses and other non-personnel related expenses such as legal expenses. Our general and administrative expenses increased by 8.8% to $3. 2 million in 2011, compared to $2.9 million in 2010. This increase in mainly attributed to additional headcount and infrastructure to support the company's growth during 2011 compared to 2010. General and administrative expenses represented 3.1% and 3.4% of our revenues in 2011 and 2010, respectively.

Benefit from Income Taxes. In 2011, based on historical taxable income from continuing operations and projections for future taxable income we determined that it is more likely than not that some of our deferred tax assets are expected to be realized, as a result we recognized $2,500 of income tax benefit.

Comparison of Years Ended December 31, 2010 and 2009

Revenues. Our revenues in 2010 increased by $47.3 million, or 120.3%, compared to 2009, with revenues attributable to product sales accounting for $71.8 million, an increase of $42.2 million, or 142.2%, compared to 2009, and revenues attributable to services accounting for $14.8 million, an increase of $5.2 million, or 53.2%, compared to 2009. The increase in product sales revenue in 2010 was attributed to a combination of the significant growth in capital spending throughout the industry, exposure to the right customers, market share gains and to the completion of our transition to direct sales. The increase in services revenues is attributed mainly to the higher utilization rates of customers manufacturing sites and the related sales of parts and repair to these sites.

Cost of Revenues and Gross Profit. Cost of revenues consists of the labor, material and overhead costs of manufacturing our systems, and the costs associated with our worldwide service and support infrastructure. It also consists of inventory write-offs and provisions for estimated future warranty costs for systems we have sold. Our cost of revenues attributable to product sales in 2010 was $29.1 million, an increase of $16.3 million, or 128.2%, compared to 2009. Our cost of revenues attributable to product sales, as a percentage of product revenues in 2010, was 40.4%, compared to 42.9% in 2009. Our gross margin attributable to product revenues in 2010 was 59.5%, compared to 57.1% in 2009. This increase in gross margins in 2010 is mainly related to the overall increase in sales volume utilizing an already existing infrastructure and to the completion of our transition to direct sales.

Our cost of revenues attributable to services in 2010 was $10.1 million, an increase of $1.1 million, or 12.8%, compared to 2009. This increase is mainly attributable to the increase in the cost of parts and repair which were sold to customers. Our gross margin attributable to services revenues in 2010 was 31.6%, compared to 7% in 2009 as a result of higher revenues utilizing an already existing infrastructure.

Our overall gross profit increased by 169.6% to $47.4 million in 2010, compared to $17.5 million in 2009. Our overall gross margin was 54.7% and 44.7% of our total revenues in 2010 and 2009, respectively. The increase in overall gross margins in year 2010 is mainly attributable to the increase in revenues resulting from the overall growth in semiconductors equipment market and to the completion of our transition to direct sales.

Research and Development Expenses, Net. Research and development expenses, net, consist primarily of salaries and related expenses and also include consulting fees, subcontracting costs, related materials and overhead expenses, after offsetting grants received or receivable from the Office of the Chief Scientist. Our net research and development expenses increased by 81.3% to $12.5 million in 2010, compared to $6.9 million in 2009, after offsetting grants received or receivable from the Office of the Chief Scientist of $2.2 million in 2010 and $2.2 million in 2009. In 2010, net research and development expenses represented 14.4% of our revenues compared to 17.4% of our revenues in 2009. This increase in research and development expenses is mainly attributed to the increase in headcount to support our products roadmap and to the increase in materials expenditures for building new products prototypes during 2010.

Approximately $8 million of our net research and development expenses in 2010 resulted from our research and development efforts relating to current integrated metrology and stand-alone products activities. Approximately $4.4 million of our net research and development expenses in 2010 were related to developing a technology infrastructure for next generation metrology tools platforms, mainly for stand-alone metrology products, and to further enhance the technology infrastructure for scatterometry based metrology solutions.

Sales and Marketing. Sales and marketing expenses are mainly comprised of salaries and related costs for sales and marketing personnel, travel related expenses and overhead. They also include commissions to our representatives and sales personnel and royalties. Our sales and marketing expenses increased by 68.5% to $10.1 million in 2010, compared to $6.0 million in 2009. The increase in sales and marketing expenses is mainly attributed to an increase in revenue based incentive payments and to costs related to customers product evaluation processes during 2010. Sales and marketing expenses represented 11.7% and 15.3% of our revenues in 2010 and 2009, respectively. The decrease as a percentage of revenue is mainly related to the significant increase in revenues in 2010.

General and Administrative. General and administrative expenses are comprised of salaries and related expenses and other non-personnel related expenses such as legal expenses. Our general and administrative expenses increased by 32.5% to $2.9 million in 2010, compared to $2.2 million in 2009. This increase in mainly attributed to the increase in our activities during 2010 compared to 2009. General and administrative expenses represented 3.4% and 5.7% of our revenues in 2010 and 2009, respectively.

5.B Liquidity and Capital Resources

As of December 31, 2011, we had working capital of approximately $94.7 million compared to working capital of $65.4 million as of December 31, 2010.

Cash and cash equivalents, short-term and long-term deposits as of December 31, 2011 were $87.1 million compared to $61.6 million as of December 31, 2010.

Trade accounts receivable increased from $13.2 million as of December 31, 2010 to $13.4 million as of December 31, 2011. Inventories decreased from $10.8 million as of December 31, 2010 to $9.6 million as of December 31, 2011, mainly due to decrease in manufacturing volumes in the end of 2011.

Operating activities in 2011 generated positive cash flow of $25.1 million compared to a positive cash flow of $25.8 million in 2010.

The following table describes our investments in capital expenditures during the last three years:

	2009		2010		2011	
	Domestic	Abroad	Domestic	Abroad	Domestic	Abroad
	(in dollar thousands)					
Electronic equipment	463	19	1,872	53	3,392	15
Office furniture and equipment	1	15	16	25	179	70
Leasehold improvements	43	13	314	0	742	99
Total	507	47	2,202	78	4,313	184

In 2011, the investment in capital expenditures was financed from our positive operating cash flow. The increase in capital expenditures for electronic equipment in 2011 is mainly attributable to an increase in capital expenditure of electronic equipment used for our research and development labs and systems for our demonstration centers and application development. Although we currently have no significant capital commitments, we expect to spend approximately $6 million on capital expenditures in 2012, mainly for information systems improvements (software and hardware) and electronic equipment used in our research and development labs and demonstration facilities.

Our principal liquidity requirement is expected to be for working capital and capital expenditures. We believe that our current cash reserves will be adequate to fund our planned activities for at least the next 12 months. Our long-term capital requirements will be affected by many factors, including the success of our current products, our ability to enhance our current products and our ability to develop and introduce new products that will be accepted by the semiconductor industry. We plan to finance our long-term capital needs with our cash reserves together with positive cash flow from operations, if any. If these funds are insufficient to finance our activities, we will have to raise additional funds through the issuance of additional equity or debt securities, through borrowing or through other means. We cannot assure that additional financing will be available on acceptable terms.

Presently, we have no long-term debt, nor any readily available source of long-term debt financing such as a line of credit.

On February 9, 2010, we successfully consummated an underwritten public follow-on offering of 4,427,500 ordinary shares (including ordinary shares sold pursuant to the over allotment option) at a price per ordinary share of $4.15, in consideration of approximately $17.0 million, net.

With regard to usage of hedging financial instruments and the impact of inflation and currency fluctuations, see “Item 11. Quantitative and Qualitative Disclosures about Market Risk” in this annual report on Form 20-F.

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

For information regarding our research and development activities, see “Item 4B – Research and Development” in this annual report on Form 20-F.

Grants from the Office of the Chief Scientist

Under the Law for the Encouragement of Industrial Research and Development, 1984, a qualifying research and development program is eligible for grants of up to 50% of the program's expenses. The program must be approved by a committee of the Office of the Chief Scientist of the Israeli Ministry of Industry, Trade and Labor. The recipient of the grants is required to return the grants by the payment of royalties on the revenues derived from using the grants. Current regulations promulgated under the law provide for the payment of royalties to the Office of the Chief Scientist ranging from 3% to 5% on the revenues derived from using the grants until 100% of the grants are repaid. Grants received under programs approved after January 1, 1999 will accrue interest at an annual rate of the 12-month LIBOR applicable to dollar deposits. Royalties are paid in NIS linked to the dollar at the exchange rate in effect at the time of payment. Following the full payment of such royalties and interest, there is generally no further liability for payment.

The terms of the grants under the law require that we manufacture the products developed with these grants in Israel. These restrictions apply even after grants are fully repaid. Under the regulations promulgated under the law, the products may be manufactured outside Israel by us or by another entity and know-how may be transferred outside of Israel, only if prior approval is received from the Office of the Chief Scientist. This approval may be given only if we abide by all the provisions of the law and related regulations. Ordinarily, as a condition to obtaining approval to manufacture outside Israel, we would be required to pay increased royalties and as a condition to obtaining approval to transfer know-how outside Israel, ordinarily we would be required to pay a lump sum, all as defined under the relevant law. If we perform the manufacturing, the increased royalties would ordinarily be one percentage point above the otherwise applicable royalty rate. If the manufacturing is performed by an entity other than us, the rate would depend on the amount of manufacturing performed outside of Israel and the size of the grants in relation to the investments made by us in the project. The total amount to be repaid to the Office of the Chief Scientist would also be adjusted to between 120% and 300% of the grants, depending on the manufacturing volume that is performed outside Israel. If we wish to transfer know-how, the terms for approval shall be determined according to the character of the transaction and the consideration paid to us for such transfer. Approval of the transfer of technology to another Israeli company may be granted only if the recipient abides by all the provisions of the law and related regulations, including the restrictions on the transfer of know-how outside of Israel and the obligation to pay royalties in an amount that may be increased. Approval to manufacture products outside of Israel or consent to the transfer of technology, if requested, might not be granted.

As of December 31, 2011, we received grants from the Office of the Chief Scientist in the aggregate amount of approximately $20.8 million. Because the implementation of regulations raising royalty rates to between 3% and 6% has been deferred, we are obligated to pay royalties of 3%-3.5% of revenues derived from sales of products funded with these grants. As of December 31, 2011, our contingent liability to the Office of the Chief Scientist for grants received was approximately $17.5 million. See also Note 7A to our consolidated financial statements contained elsewhere in this report.

The funds available for grants from the Office of the Chief Scientist were reduced for 2004 and 2005, and the Israeli authorities have indicated that the government may further reduce or abolish grants of this kind in the future. Even if these grants are maintained, we might not receive them in the future and cannot presently predict the amount of any grants we might receive.

In addition to royalty-bearing grants from the Office of the Chief Scientist, in 2010, we participated in a program, IMG4, sponsored by the Office of Chief Scientist. Under the terms of this program, we were cooperating with additional companies and research institutes in Israel, organized in a consortium, for the development of advanced techniques for improved tool control. The Office of the Chief Scientist is contributing 66% of the approved research and development budget for the research consortium and the members of the research consortium contributing the remaining 34%. No royalties from this funding are payable to the Israeli government, however, the provisions of the law and related regulations regarding the restrictions on the transfer of know-how outside of Israel do apply. Expenses in excess of the approved budget are borne by the consortium members. In general, any consortium member that develops technology as part of the consortium retains the intellectual property rights to the technology developed by this member, and all the members of the consortium have the right to utilize and implement such technology without having to pay royalties to the developing consortium member. Since our collaboration with this consortium will not deal with issues that are part of our core technology, we believe that it will have no effect on our strong intellectual property portfolio. The IMG4 program has ended during 2010.

5.D Trend Information

For Information regarding most significant recent trends in our market, see “Item 4B – Our Market – The World Economy - Update” in this annual report on Form 20-F.

5.E Off-Balance Sheet Arrangements

We do not have and are not party to any off-balance sheet arrangements.

5.F Tabular Disclosure of Contractual Obligations

As of December 31, 2011 we had contractual obligations as described in the following table:

	Payment due by Period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Operating Lease Obligations	2,079	1,717	350	12	--
Purchase Obligations	4,632	4,302	330	--	--
Other Long Term Liabilities	20	--	20	--	--
Total	6,731	6,019	700	12	--

Item 6. Directors, Senior Management and Employees

6.A Directors and Senior Management

The following is the list of senior management and directors as of March 1, 2012:

Name	Age	Position
Michael Brunstein	68	Chairman of the Board of Directors
Alon Dumanis	61	Director
Dan Falk	67	External Director
Naama Zeldis	48	External Director
Avi Cohen	58	Director
Gabi Seligsohn	45	President and Chief Executive Officer
Dror David	42	Chief Financial Officer
Eitan Oppenhaim	46	Executive Vice President Global Business Group
Gabi Sharon	49	Vice President Operations
Shay Wolfling	40	Chief Technology Officer

Hila Mukevisius	37	Vice President Human Resources
Tal Shmueli	48	Vice President Research and Development
Dov Farkash	52	Vice President Business Development

Our directors (other than the external directors) serve as such until the next annual general meeting of our shareholders. Our external directors, in accordance with Israeli law, serve for a three-year term, which may be renewed for two additional three-year terms, subject to certain conditions, and thereafter for additional three-year terms, if both the audit committee and the board of directors confirm that in light of the expertise and contribution of the external director, the extension of such external director’s term would be in the interest of the Company. Mr. Dan Falk was elected in 2005 to serve for a three-year term that expired in 2008. Mr. Falk was re-elected in 2008 for an additional three-year term that expired in 2011 and was re-elected in 2011 for an additional three-year term. Ms. Zeldis was elected in 2006 to serve for a three-year term that expired in 2009 and was re-elected in 2009 for an additional three-year term.

Our board of directors determined that Dan Falk, Naama Zeldis and Avi Cohen are independent directors under the Companies Law. In addition, our board of directors determined that Dan Falk, Naama Zeldis, Avi Cohen, Michael Brunstein and Alon Dumanis, qualify as ‘‘independent directors’’ as defined by The NASDAQ Stock Market.

Dr. Michael Brunstein was named chairman of our board of directors in June 2006, after serving as member of our board of directors from November 2003. During the years 1990 and 1999, Dr. Brunstein served as Managing Director of Applied Materials Israel Ltd. Prior to that, Dr. Brunstein served as President of Opal Inc., and as a Director of New Business Development in Optrotech Ltd. At present, Dr. Brunstein serves as a board member of Ham-let Ltd., a company listed on the TASE. He is a chairman and serves on boards of directors of several privately owned companies. Dr. Brunstein holds a B.Sc. in Mathematics and Physics from the Hebrew University, Jerusalem, and a M.Sc. and a Ph.D. in Physics from Tel Aviv University.

Dr. Alon Dumanis has served as a director of Nova since 2002. He is the Chief Executive Officer of Crecor B.V, Docor International B.V, Docor Levi Lassen I BV, Docor Levi Lassen II BV and Docor International Management Ltd., all Dutch investment companies, subsidiaries of The Van-Leer Group Foundation. Dr. Dumanis is currently a chairman of Aposense (TASE-APOS), XSight System, Softlib, Bondex, Clariton, DNR Imaging, and a member of the board of directors of Spectronix (TASE-SPCT), Collplant (TASE-CLPT), Ice Cure (TASE-ICCM), and other Hi Tech companies in Docor's investment portfolio. Dr. Dumanis is a former member of the board of directors of Tadiran Communications (TASE-TDCM), of El Al Israel Airlines (TASE-LY), of Protalix Biotherapeutics (NYSE-PLX), and a former member of the board of directors of Inventech Investments Co. Ltd. (TASE-IVTC). Previously, Dr. Dumanis was the Head of the Material Command in the Israel Air Force at the rank of Brigadier General. Dr. Dumanis currently serves as chairman and member of several national steering committees and is the author of many papers published in a number of subject areas, including technology and management. Dr. Dumanis holds a Ph.D. in Aerospace Engineering from Purdue University, West Lafayette, Indiana, USA.

Mr. Dan Falk was elected as the Company's external director in accordance with the provisions of the Companies Law in 2005, was re-elected for an additional term on September 25, 2008 and on June 30, 2011. Mr. Falk is a business consultant to public and private companies. During 1999 to 2000, Mr. Falk served as Chief Executive Officer and Chief Operating Officer of Sapiens International NV. Prior to that, Mr. Falk served as Executive Vice President and Chief Financial Officer of Orbotech Ltd. Mr. Falk serves as a member of various companies' boards of directors such as Orbotech Ltd., Nice Systems Ltd., Ormat Technologies, Inc., Attunity Ltd., (all of which are companies publicly traded in the United States), Orad Hi-Tec Systems Ltd. (as chairman of the board of directors), Amiad Water Systems, Oridion Medical Ltd. (all of which are companies publicly traded in Europe) and Plastopil Ltd. (traded on the TASE). Mr. Falk's son-in-law is a partner at Gross, Kleinhendler, Hodak, Halevy, Greenberg & Co., our outside counsel.

Ms. Naama Zeldis was elected as the Company's external director in accordance with the provisions of the Companies Law in 2006, and was re-elected for an additional term in 2009. Ms. Zeldis has been serving as Chief Financial Officer of Netafim Ltd. since December 2005. Prior to that, she served as Chief Financial Officer of EDS Israel, Radguard, and Director of Finance of RAD Data Communications. Ms. Zeldis is a former member of the board of directors and of the audit committee of Metalink. Ms. Zeldis holds a B.A. in Economics and an M.A. in Business Administration, majoring in Financing, from the Hebrew University of Jerusalem and a B.A. in Accounting from Tel-Aviv University.

Mr. Avi Cohen has served as a director of Nova since 2008. Mr. Cohen serves as President and Chief Executive Officer at Orbit Technologies, a public company traded on the TASE. On April 1, 2012 Mr. Cohen will terminate his position as Chief Executive Officer at Orbit and will become Orbit's President. Orbit is a leading designer, developer, and manufacturer of a wide range of advanced communication systems for the commercial and defense markets. Prior to joining Orbit in December 2008, Mr. Cohen served as Chief Operating Officer and Deputy to the CEO at ECI Telecom Ltd. a leading supplier of best-in-class networking infrastructure equipment for carrier and service provider networks worldwide. Prior to joining ECI in September 2006, Mr. Cohen served in a variety of management positions at KLA-Tencor. From 2003 he was a Group Vice President, Corporate Officer and Member of the Executive Management Committee based at the corporate headquarters in the U.S. During his tenure, he successfully led the creation of KLA-Tencor's global Metrology Group. From 1995 he was the President of KLA-Tencor Israel responsible for the Optical Metrology Division. Before joining KLA-Tencor, Mr. Cohen also spent three years as Managing Director of Octel Communications, Israel, after serving as Chief Executive Officer of Allegro Intelligent Systems, which he founded and which was acquired by Octel. Mr. Cohen holds B.Sc. and M.Sc. degrees in electrical engineering and applied physics from Case Western Reserve University, USA.

Mr. Gabi Seligsohn has served as the President and Chief Executive Officer since August 2006. Having joined Nova in 1998, Mr. Seligsohn has served in several key positions in the Company including as the Executive Vice President, Global Business Management Group from August 2005 to August 2006. From August 2002 until August 2005 he was President of Nova's U.S. subsidiary, Nova Measuring Instruments Inc. Prior to that he was Vice President Strategic Business Development at Nova Measuring Instruments Inc. where he established Nova's OEM group managing the Applied Materials and Lam Research accounts between the year 2000 to 2002. From 1998 to 2000 he served as Global Strategic Account Manager for the Company's five leading customers. Mr. Seligsohn joined Nova after two years service as Sales Manager for key financial accounts at Digital Equipment Corporation. Mr. Seligsohn holds an LL.B. from the University of Reading, Reading, England.

Mr. Dror David has served as the Chief Financial Officer since November 2005. Mr. David joined Nova in April 1998, as the Company’s Controller, and since than served in various financial and operational positions, including the position of Vice President of Resources, in which he was responsible for the finance, operations, information systems and human resources functions of the Company. Mr. David was also a leading member in the Company’s initial public offering on NASDAQ in 2000 and the Company’s private placement in 2007. Prior to joining Nova, Mr. David spent five years in public accounting with Delloitte Touch in Tel Aviv, specializing in industrial high-tech companies. Mr. David is a Certified Public Accountant in Israel, holds a B.A. in Accounting and Economics from Bar Ilan University, and an M.B.A. from Derby University of Britain.

Mr.Eitan Oppenhaim has served as the Executive Vice President Global Business Group since November 2010. From 2009 until 2010, Mr. Oppenhaim served as Corporate Vice President and Europe General Manager at Alvarion Ltd., a global leader in 4G wireless communications providing WiMAX solutions. During the years 2007 through 2009, Mr. Oppenhaim served as Vice President of sales and marketing at OptimalTest Ltd., a startup company which develops Test Management Solutions software for optimizing the test operation floor in the semiconductor industry. Prior to that, from 2002 till 2006, Mr. Oppenhaim served as President of the Flat Panel Displays division at Orbotech Ltd., a leader company for Automated Optical Inspection systems. From 2001 till 2002, Mr. Oppenhaim served as Managing Director of Asia Pacific at TTI Telecom International, a company which develops network management software solutions to telecom operators and service providers. Prior to that, from 1994 till 2001, Mr. Oppenhaim held several key sales positions at Comverse Network Systems Ltd., a supplier of value added srvices and customized solutions to telecom operators and service providers, and its subsidiary in Asia Pacific. Prior to joining Comverse, during the years 1983 and 1994, Mr. Oppenhaim served at the Israeli navy. Mr. Oppenhaim holds a BA in Economics and Accounting from the Haifa University, Israel and an MBA from Ben-Gurion University, Beer-Sheva, Israel.

Mr. Gabi Sharon has served as Vice President of Operations since September 2006. Having joined Nova in 1995, Mr. Sharon served in several key positions in the Company including as Global Customer Support Manager from September 1995 to September 2004. From September 2004 until September 2006 Mr. Sharon managed the Product Development Division, and spearheaded the NovaScan 3090 product line and its successful market launch. For a period of two years, from 2004 to 2006, he also served as the Product Marketing Manager and led the initial penetration of the Copper CMP market. Prior to joining Nova Mr. Sharon served as Project Manager in ECI Israel. Mr. Sharon holds a B.Sc. in Computer Science from Northeastern University, Boston, Massachusetts, and a M.Sc. in Technology Management from Polytechnic University, New York.

Dr. Shay Wolfling joined Nova in 2011. Prior to joining Nova, Dr. Wolfling was an R&D manager at KLA-Tencor-Belgium (formerly ICOS Vision Systems, a publically traded company acquired by KLA in 2008), where he led multidisciplinary metrology & inspection development projects. From 2000 until its technology acquisition by ICOS in 2005, Dr. Wolfling was a founder and Vice President of Research and Development of Nano-Or-Technologies, a start-up company with a proprietary technology for 3D optical measurements. Dr. Wolfling took Nano-Or from the idea stage to initial product sales. Prior to founding Nano-Or, Dr. Wolfling was a project manager in Y-Beam-Technologies, a start-up offering laser-based skin treatments. Dr. Wolfling has several patents under his name in the field of optical measurements. Dr. Wolfling holds a B.Sc. in physics and mathematics from the Hebrew University of Jerusalem, Israel, a second degree in physics from Tel-Aviv University, Israel and a PhD in physics from the Hebrew University of Jerusalem, Israel.

Ms. Hila Mukevisius has served as Vice President Human Resources since May 2008. Ms. Mukevisius joined Nova after eight years at Amdocs Ltd., a market leader in customer experience systems innovations, where she held several positions as HR Director of large scale global groups. Ms. Mukevisius holds a B.A. in Behavioral Science from the College of Management, Academic Studies, Tel Aviv, Israel, specializing in organization development and MA in Diplomacy and Security from the Tel Aviv University, Israel.

Mr. Tal Shmueli has served as Vice President of Research and Development since March 2011. Mr. Shmueli rejoined Nova in 2010 as Vice President Product Development. Prior to that, from 2008 till 2010, Mr. Shmueli served as Director of Hardware Development and Product Management at MDG Medical, a company which develops and markets unique technologies, solutions and services for the healthcare industry. During the years 2006 and 2008, Mr. Shmueli served as Director of Product Management at CogniTens, a supplier of metrology solutions for the car industry. Prior to that, from 1993 till 2006, Mr. Shmueli held several positions at Nova, including product and technology management and support. Mr. Shmueli holds BSc. degree in Electrical Engineering from the Technion, Haifa, Israel.

Mr. Dov Farkash has served as Vice President Business Development since October 2009. Mr. Farkash joined Nova in 2000 and till 2005 he served in various key sales positions in Nova. From 2005 until 2009, Mr. Farkash has served as VP Sales of Nova. Prior to joining Nova, Mr. Farkash served as worldwide Sales and Marketing Manager of AFCON Ltd., and AFCON Inc., USA. Prior to that, Mr. Farkash served in various managerial positions in software development in various Hi-tech companies. Mr. Farkash holds a B.Sc. in Computer Engineering and an MBA from the Technion – Israel Institute of Technology, Haifa, Israel.

Voting Agreement

We are not aware of any voting agreement currently in effect.

6.B Compensation

The aggregate direct remuneration paid or payable to all persons who served in the capacity of executive officer (consisting of nine persons, including one former executive officer of the Company) during 2011 was approximately $2.36 million including approximately $0.53 million, which was set aside for pension and retirement benefits and including amounts expended by the Company for automobiles made available to our executive officers.

The total amount paid or payable to the directors, including external directors, (consisting of five persons) for 2011 was $0.2 million.

As of March 1, 2012, 1,300,628 options to purchase our ordinary shares were outstanding to certain executive officers and directors (consisting of 13 persons), of which 595,726 options are currently exercisable or exercisable within 60 days of March 1, 2012. See “Item 6E. Share Ownership” in this annual report on Form 20-F.

The compensation arrangement of the Company’s directors (excluding the chairman of the board of directors and, unless approved otherwise, any other director who is also an employee of the Company), as approved by our shareholders at the 2007 and 2008 annual general meetings, includes:

1. An annual payment of US$12,000 (in an equivalent amount in NIS), subject to the minimal and maximal payment restrictions applicable to the Company under the Companies Regulations (Rules Regarding Compensation and Expenses to an External Director), 2000, and the Companies Regulations (Relief for Public Companies with Shares Listed for Trading on a Stock Market Outside of Israel), 2000 (collectively, the “Regulations”).

2. Additionally, the following payments (subject to the minimal and maximal payment restrictions applicable to the Company under the Regulations):

a. for each meeting that the director or external director attends in person, an amount of US$600 (in an equivalent amount in NIS);

b. for each execution of a written consent in lieu of a meeting, an amount of US$300 (in an equivalent amount in NIS); and

c. for each meeting that the director or external director attends by teleconference, an amount of US$360 (in an equivalent amount in NIS).

3. An annual award of an option to purchase up to 10,000 ordinary shares to be granted to each director or external director on the date of each annual general meeting at which such director or external director is elected or reelected. The exercise price of each option shall be determined pursuant to the Company’s Equity Based

Compensation Policy.

In addition, the compensation arrangement of Dr. Michael Brunstein, the chairman of our board of directors, as approved by our shareholders at the 2006, 2008 and 2010 annual general meetings, includes: (i) a gross annual fee of $110,000 payable monthly in NIS; (ii) an annual award of options to purchase up to 10,000 ordinary shares, to be granted to Dr. Brunstein on the date of each annual general meeting at which the chairman of the board of directors is elected or reelected, starting the 2008 annual general meeting, the exercise price of which shall be determined pursuant to the Company's Equity Based Compensation Policy and the other terms (i.e., the amount, exercise price and vesting schedule) shall be identical to the terms of options granted to other directors on an annual; and (iii) a biennial award of an option to purchase up to 75,000 ordinary shares to Dr. Brunstein on the date of every other annual general meeting at which the chairman of the board of directors is elected or reelected, starting with the 2010 annual general meeting (and thereafter in 2012). The exercise price of such options shall be determined pursuant to the Company's Equity Based Compensation Policy, and 25% of each option shall vest and become exercisable on the first anniversary of its grant date and thereafter 2.083% of each option shall vest and become exercisable at the end of each complete month following the first anniversary date (i.e. each option shall fully vest and become exercisable at the 4th anniversary date of its grant date).

Between November 1, 2008 and October 31, 2009, the Company resolved to temporarily reduce the compensation awarded to all directors and officers of the Company in light of business conditions, excluding the compensation of external directors whose compensation was reduced between May 10, 2009 and October 31, 2009 according to guidance of the Israeli Securities Authority (since the compensation of external directors cannot be modified during the term of their service under the Israeli law, subject to a few statutory exceptions).

6.C Board Practices

Board of Directors' Committees

Amendment 16 to the Companies Law, which recently came into effect, amended certain provisions of the Companies Law, relating, among others, to the autonomy of the board of directors and the external directors, and to the composition and responsibilities of the audit committee.

The Company's board of directors has appointed the following committees:

The Audit Committee is comprised of Dan Falk, Naama Zeldis and Avi Cohen. The audit committee is responsible to assist the board of directors in fulfilling its responsibility for oversight of the quality and integrity of accounting, auditing and financial reporting practices of the Company. According to the Companies Law, the audit committee must consist of at least three directors, must include all of the external directors, and the majority of its members must be independent directors under the Companies Law. The following individuals may not be members of the audit committee: (i) the chairman of the board of directors; (ii) any director employed by the Company, its controlling shareholder or any entity under the control of the controlling shareholder; (iii) and director providing services on a regular basis to the Company, its controlling shareholder or any entity under the control of the controlling shareholder; (iv) any director whose main source of income comes from the Company's controlling shareholder; or (v) the Company's controlling shareholders or any of their relatives. The chairman of the audit committee must be an external director, who has not been serving as a chairman of the audit committee for more than nine years. Under the Companies Law, the audit committee is responsible, among others, for (i) identifying deficiencies in the administration of the Company, including by consulting with the internal auditor, and recommending remedial actions with respect to such deficiencies; (ii) reviewing and approving related party transactions, including, among others, determining whether or not such transactions are deemed material actions or extraordinary transactions; (iii) evaluating the Company's internal audit programme and the performance of the Company's internal auditor and the resources at his/her disposal; (iv) reviewing the scope of work of the Company's external auditor and making recommendations regarding his/her salary; and (v) creating procedures relating to the employees' complaints regarding deficiencies in the administration of the Company. The audit committee operates under a charter adopted by the board of directors.

The Compensation Committee is comprised of Avi Cohen, Dan Falk and Michael Brunstein. The function of the compensation committee is described in the approved charter of the committee, and includes assisting the board of directors in discharging its responsibilities relating to compensation of the Company's directors and executives and the overall compensation programs. The primary objective of the committee is to oversee the development and implementation of the compensation policies and plans that are appropriate for the Company in light of all relevant circumstances and which provide incentives that further the Company's long-term strategic plans and are consistent with the culture of the Company and the overall goal of enhancing enduring shareholder value.

The Nominating and Corporate Governance Committee is comprised of Alon Dumanis, Dan Falk and Michael Brunstein. The function of the nominating committee is described in the approved charter of the committee, and includes responsibility for identifying individuals qualified to become board members and recommending that the board of directors consider the director nominees for election at the general meeting of shareholders. The nominating and corporate governance committee is also responsible for developing and recommending to the board of directors a set of corporate governance guidelines applicable to the Company, periodically reviewing such guidelines and recommending any changes thereto.

On December 18, 2008, our board of directors resolved to abolish the investment committee. The matters that were under the scope of the investment committee will be brought under the direct authority of our board of directors, which from time to time may ask for an ad-hoc investment committee to be assembled. On September 7, 2010, our board of directors resolved to authorize the audit committee to fulfill the scope of the investment committee.

On August 2, 2010, our board of directors resolved to abolish the strategic committee. The matters that were under the scope of the strategic committee will be brought under the direct authority of our board of directors.

All committees are acting according to written charters that were approved by our board of directors.

Internal Auditor

Under the Companies Law, the board of directors must also appoint an internal auditor nominated by the audit committee. Our internal auditor is Mr. Guy Sapir, C.P.A (Isr) of Kesselman & Kesselman PwC Israel. The role of the internal auditor is to examine whether a company's actions comply with the law and proper business procedure. The internal auditor may not be an interested party or office holder, or a relative of any interested party or office holder, and may not be a member of the company's independent accounting firm or its representative. The Companies Law defines an interested party as a holder of 5% or more of the shares or voting rights of a company, any person or entity that has the right to nominate or appoint at least one director or the general manager of the company or any person who serves as a director or as the general manager of a company.

6.D Employees

Set forth below is a chart showing the number of people we employed at the times indicated:

	As of December 31,		
	2009	2010	2011
Total Personnel	227	279	344
Located in Israel	159	201	252
Located abroad	68	78	92
In operations	53	71	81
In research and development	64	78	110
In global business	93	113	131
In general and administration	17	17	22

We were a member of the Industrialists Association in Israel, an employer's union until December 31, 2006. Under applicable Israeli law, we and our employees are subject to protective labor provisions such as restrictions on working hours, minimum wages, paid vacation, sick pay, severance pay and advance notice of termination of employment as well as equal opportunity and anti-discrimination laws. Orders issued by the Israeli Ministry of Industry, Trade and Labor make certain industry-wide collective bargaining agreements applicable to us. These agreements affect matters such as cost of living adjustments to salaries, length of working hours and week, recuperation and travel expenses. In Israel, Nova is subject to the instructions of the Extension Order in the Industrial Field for Extensive Pension Insurance 2006 according to the Israeli Collective Bargaining Agreements Law, 1957 (the "Extension Order"). The Extension Order ensures the pension insurance of most employees which fall under its criteria.

6.E Share Ownership

The following table sets forth information regarding the beneficial ownership of our ordinary shares as of March 1, 2012 by our executive officers and directors.

Beneficial ownership of shares is determined in accordance with the rules of the SEC and generally includes any shares over which a person exercises sole or shared voting or investment power. Ordinary shares that are subject to warrants or options that are presently exercisable or exercisable within 60 days of the date of March 1, 2012 are deemed to be outstanding and beneficially owned by the person holding the options for the purpose of computing the percentage ownership of that person, but are not treated as outstanding for the purpose of computing the percentage of any other person.

Based on information provided to us, each shareholder in the table below has sole voting and investment power for the shares shown as beneficially owned by them. Percentage ownership is based on 26,549,142 ordinary shares outstanding as of March 1, 2012.

Executive Officers and Directors:	Number	Percent	
Gabi Seligsohn(1*)	383,827	1.45	%
13 directors and officers as a group (2)	638,887	2.41	%

* All other directors and executive officers each beneficially owned less than 1% of the Company's shares.

(1) Includes 362,466 shares subject to options that are immediately exercisable or exercisable within 60 days of March 1, 2011 (expiration dates: 2013-2020; exercise prices ($/share): 1.25-6.30).

(2) Includes 595,726 shares subject to options that are immediately exercisable or exercisable within 60 days of March 1, 2011 (expiration dates: 2013-2020; exercise prices ($/share): 0.43-6.30).

Employee Benefit Plans

Through December 31, 2011, options to acquire 9,506,057 ordinary shares had been issued, of which 3,702,245 options to acquire ordinary shares were exercised, 4,227,998 were cancelled, 941,562 options were unvested and 634,252 were exercisable, as of December 31, 2011. As of December 31, 2011, 331,451restricted share units, or RSU's, had been issued, of which 153,812 had vested and 1,350 had been cancelled.

The share option plans active throughout 2011, are described below:

Option Plan 7A - As of December 31, 2011, options to purchase 600,000 ordinary shares at exercise prices of $4.01 and $5.15, the fair market value of Nova's stock on the date of grant were granted, of which 146,195 options were exercised, and 453,805 options had been cancelled. No option was exercisable as of December 31, 2011. On September 29, 2005, our shareholders approved amendments to the plan allowing our board of directors to accelerate the vesting dates and to determine an exercise price which is different from the fair market value of our shares at the date of grant. We do not intend to grant any further options or shares under this plan;

Option Plan 7B - As of December 31, 2011, options to purchase 650,000 ordinary shares at an exercise price of $3.40, the fair market value of Nova's stock on the date of grant were granted, of which 173,225 options were exercised and 476,775 had been cancelled. No option was exercisable as of December 31, 2011. On September 29, 2005, our shareholders approved amendments to the plan allowing our board of directors to accelerate the vesting dates and to determine an exercise price which is different from the fair market value of our shares at the date of grant. We do not intend to grant any further options or shares under this plan;

Option Plan 7C - As of December 31, 2011, options to purchase 153,000 ordinary shares at an exercise price of $2.20, the fair market value of Nova's stock on the date of grant were granted, of which 30,548 options were exercised and 122,452 options had been cancelled. No option was exercisable as of December 31, 2011. We do not intend to grant any further options or shares under this plan;

Option Plan 8 - As of December 31, 2011, options to purchase 1,496,620 ordinary shares at an exercise prices ranging from $1.79 to $2.87, the fair market value of Nova's stock based on the date of grant, were granted. As of December 31, 2011, 661,676 options were exercised, 278,601 options were exercisable and 556,343 options had been cancelled. We do not intend to grant any further options or shares under this plan;

2007 Incentive Plan - The maximum number of ordinary shares to be issued under the plan, which was adopted by our shareholders on October 25, 2007, is 2,500,000, subject to future increases or decreases by the Company. As of December 31, 2011, options to purchase 1,805,337 ordinary shares at an exercise prices which range from $0.43 to $10.83, the fair market value of Nova's stock based on the dates of grant, were granted under this plan of which, as of December 31, 2011, 313,794 options were exercised, 355,651 options were exercisable, 194,330 options had been cancelled and 941,562 were unvested. As of December 31, 2011, 331,451 RSU's had been issued, of which 153,812 had vested and 1,350 had been cancelled.

On December 20, 2006, the board of directors resolved to amend the Company's incentive plans to clarify that the blackout period pursuant to the Company's blackout policy shall be excluded from the 30-day exercise period allowed under the various incentive plans following the termination of employment.

On February 19, 2007, the board of directors adopted an Equity Based Compensation Policy, according to which the exercise price of granted options will be as provided by the applicable incentive plan, provided, however, that in the event that the grant approval takes place during a blackout period, the exercise price of the options granted will be equal to the closing price of our ordinary shares on NASDAQ on the trading day immediately following the last day of the blackout period (with the exception of approvals subject to shareholder approvals, in which case, the exercise price shall be the closing price on the day of the shareholder approval).

The following table summarizes information about share options outstanding as of December 31, 2011:

	Outstanding as of December 31, 2011			Exercisable as of December 31, 2011	
Range of exercise prices (US dollars)	Number outstanding	Weighted average remaining contractual life (in years)	Weighted average exercise price (US dollars)	Number exercisable	Weighted average exercise price (US dollars)
0.43-1.95	446,704	6.2	1.19	240,060	1.26
2.06-2.87	231,965	2.5	2.86	231,839	2.86
4.01-4.78	171,250	8.4	4.36	65,001	4.36
5.48	5,000	5.6	5.48	1,672	5.48
6.08-6.70	306,725	8.4	6.40	93,180	6.36
7.37-7.40	10,000	8.9	7.40	2,500	7.40
8.4-10.83	404,170	6.5	8.97	-	-
	1,575,814	6.4	4.84	634,252	2.95

Item 7. Major Shareholder and Related Party Transactions

A. Major Shareholders

The following table sets forth certain information regarding the beneficial ownership of our outstanding ordinary shares as of March 1, 2012 (unless otherwise stated below) for each person who we know beneficially owns five percent or more of the outstanding ordinary shares.

Beneficial ownership of shares is determined under rules of the SEC and generally includes any shares over which a person exercises sole or shared voting or investment power. In addition, the following table includes the number of shares underlying options and warrants that are currently exercisable or exercisable within 60 days of March 1, 2012, if any. Ordinary shares subject to these warrants are deemed to be outstanding for the purpose of computing the ownership percentage of the person holding these options, but are not deemed to be outstanding for the purpose of computing the ownership percentage of any other person. Applicable percentages are based on 26,549,142 ordinary shares outstanding as of March 1, 2012.

Name

	Number of Ordinary Shares Beneficially Owned	Percentage of Ordinary Shares Beneficially Owned	
Clal Electronics Industries Ltd. (1)	2,174,476	8.19	%
Federated Investors, Inc. (2)	1,841,149	6.93	%

(1) The information is based upon Amendment No. 6 to Schedule 13D filed with the SEC by, among others, Clal Electronics Industries Ltd., or "CEI", on March 21, 2011 and information that was provided by Clal Industries and Investments Ltd. ("Clal"). The principal parent companies of the IDB Group are IDB Holding Corporation Ltd., or "IDBH", and its majority-owned subsidiary, IDBD Corporation Ltd., or "IDBD". Clal and CEI (a wholly owned subsidiary of Clal) are majority-owned subsidiaries of IDBD. IDBH is controlled as follows:

- Ganden Holdings Ltd., or "Ganden", which is a private Israeli company controlled by Nochi Dankner (who is also the chairman of IDBH, IDBD and Clal) and his sister Shelly Bergman, holds, as of November 7, 2011, directly and through a wholly-owned subsidiary, approximately 54.7% of the outstanding shares of IDBH (of which, approximately 17.5% of the outstanding shares of IDBH are held directly and approximately 37.2% of the outstanding shares of IDBH are held through Ganden Investments I.D.B. Ltd., or "Ganden Investment", a private Israeli company, which is an indirect wholly owned subsidiary of Ganden). In addition, Shelly Bergman holds, through a wholly owned company, approximately 4.2% of the outstanding shares of IDBH;

- Avraham Livnat Ltd., or "Livnat", which is a private company controlled by Avraham Livnat (one of whose sons, Zvi Livnat, is a director and executive vice president of IDBH, Deputy Chairman of IDBD, co-chief executive officer of Clal, and another son, Shay Livnat, is a director of IDBD and Clal) holds, directly and through a wholly-owned subsidiary, approximately 13.31% of the outstanding shares of IDBH (of which, approximately 3.11% are held directly and approximately 10.2% of the outstanding shares of IDBH are held through Avraham Livnat Investments (2002) Ltd., or "Livnat Investment", a private Israeli company, which is a wholly owned subsidiary of Livnat); and

- Manor Holdings BA Ltd., or "Manor", a private company controlled by Ruth Manor (whose husband, Isaac Manor, is deputy chairman of IDBH and a director of IDBD and Clal, and whose son, Dori Manor, is a director of IDBH, IDBD and Clal) holds, directly and through a majority-owned subsidiary, approximately 13.3% of the outstanding shares of IDBH (of which, approximately 3.05% are held directly and approximately 10.25% of the outstanding shares of IDBH are held through Manor Investments - IDB Ltd. , or "Manor Investments", a private Israeli company which is controlled by Manor).

Subsidiaries of Ganden, Livnat and Manor have entered into a shareholders agreement with respect to shares of IDBH constituting 31.0%, 10.3% and 10.3%, respectively, of the outstanding shares of IDBH for the purpose of maintaining and exercising control of IDBH as a single group of shareholders. Their additional holdings in IDBH are not subject to the shareholders agreement. The term of the shareholders agreement expires in May 2023.

Based on the foregoing, IDBH (by reason of its control of IDBD and by reason of IDBD's control of Clal and CEI), Ganden, Livnat and Manor (by reason of their control of IDBH), Mr. Nochi Dankner, Ms. Shelly Bergman, Mr. Avraham Livnat and Ms. Ruth Manor (by reason of their control of Ganden, Livat and Manor, respectively) may be deemed to share with CEI the power to vote and dispose of our shares held by CEI. The address of CEI is: 3 Azrieli Center, Tel Aviv 67021, Israel.

On March 10, 2010, Clal, through CEI, effected the sale of 1,000,000 ordinary shares. On March 11, 2010, Clal, through CEI, fully exercised a warrant for 872,092 ordinary shares on a cashless basis, and as a result of which was issued 336,134 ordinary shares.

In February 2011, Clal sold 650,000 of our ordinary shares.

(2) The information is based upon Amendment No. 1 to Schedule 13G filed with the SEC by Federated Investors, Inc., Voting Shares Irrevocable Trust, John F. Donahue and Rhodora J. Donahue, on February 9, 2012.

All the shareholders of the Company have the same voting rights.

To our knowledge, the significant changes in the percentage of ownership held by our major shareholders during the past three years have been: (i) the decrease in the percentage of ownership held by CEI following the sale of our ordinary shares in 2010 and 2011; (ii) the decrease in the percentage of ownership held by Tamir Fishman Ventures II, L.L.C., Shai Saul, Michael Elias, Tamir Fishman & Co. Ltd., Eldad Tamir and Danny Fishman in 2009, following the sale of our ordinary shares; (iii) the decrease in the percentage of ownership held by Austin W. Marxe and David Greenhouse in 2010, following sales of our ordinary shares. As reported on Amendment No. 8 to Schedule 13G filed with the SEC on February 10, 2011 by Messrs. Austin W. Marxe and David Greenhouse, as of January 31, 2011, Messrs. Marxe and Greenhouse beneficially owned 4.1% % of our ordinary shares; (iv) the decrease in the percentage of ownership held by Teuza - A Fairchild Technology Venture Ltd. in 2010, following sales of our ordinary shares; (v) the decrease in the percentage of ownership held by Rima Management, LLC in 2010 and 2011, following sales of our ordinary shares. On January 10, 2011 Rima Management, LLC exercised warrants for 406,975 ordinary shares on a cash basis and on January 28, 2011 Rima Management, LLC exercised warrants for 174,418 ordinary shares on a cash basis. As a result 581,393 ordinary shares were issued; and (vi) the decrease in the percentage of ownership held by James Alpha Small Cap Master Fund, L.P., James Alpha, LLC, James Alpha Management I, L.P. and Kevin R. Green (collectively, "James Alpha"). As reported on Schedule 13G filed with the SEC by James Alpha on November 14, 2011, James Alpha beneficially owned 1,616,400 of our ordinary shares (then representing 6.2% of our issued and outstanding share capital). As reported on Amendment No. 1 to Schedule 13G filed with the SEC on February 9, 2012, James Alpha no longer owned shares of the Company as of such date.

As of March 1, 2011, our ordinary shares were held by 28 registered holders. Based on the information provided to us by our transfer agent, as of March 1, 2011, 23 registered holders were U.S. holders and held approximately 1.54% of outstanding ordinary shares (not including shares held by CEDE & Co.).

Control of Registrant

To the Company's knowledge, it is not owned or controlled by a foreign government. Except for the shareholders identified above owning more than ten percent of the Company's ordinary shares, the Company has no knowledge of any corporation or other natural or legal person owning a controlling interest in the Company.

B. Related Party Transactions

In 2007, 2008 and 2009, we obtained directors' and officers' liability insurance for our officers and directors with coverage in an aggregate amount of $10,000,000. This directors' and officers' liability insurance was presented and approved by the audit committee and the board pursuant to requirements of the Companies Law and according to the resolution of the 2007 annual general meeting, under which the aggregate annual premium to be paid by the Company will not exceed 2% of the aggregate coverage of the directors' and officers' insurance policies and the aggregate coverage of the directors' and officers' insurance policies will not exceed the greater of $10 million or 20% of the Company's shareholder equity.

In February 2010, we obtained an excess layer to our current directors' and officers' liability insurance with coverage in an aggregate amount of $5,000,000 (in addition to our aforementioned $10,000,000 insurance coverage). This excess layer of the directors' and officers' liability insurance was presented and approved by the audit committee and the board. At the 2010 annual general meeting, the shareholders approved and ratified the purchase of this excess layer insurance policy of $5 million with respect to director's and officers' liability and approved the company's future purchase of insurance policies with respect to director's and officers' liability for any coverage period ending no later than December 31, 2015, which terms shall be approved by the company's audit committee and the board of directors, provided, that the aggregate annual premium to be paid by the Company will not exceed 1.5% of the aggregate coverage of the directors' and officers' insurance policies and the aggregate coverage of the directors' and officers' insurance policies will not exceed the greater of $25 million or 30% of the company's shareholder equity. In February 2011, we obtained directors' and officers' liability insurance for our officers and directors with coverage in an aggregate amount of $25,000,000. This excess layer of the directors' and officers' liability insurance was presented and approved by the audit committee and the board.

In addition, we undertook to indemnify our officers and directors. Following the 2005 amendment to the Companies Law, on August 31, 2006, the shareholders at the annual general meeting approved an amended letter of indemnification to be given to our directors and officers. The aggregate indemnification amount that the Company will pay to all its officers and directors pursuant to these letters of indemnification shall not exceed $10,000,000 or 30% of the Company's shareholders equity, according to the most recent consolidated financial statement prior to the date of indemnification payment, the higher of the two. Prior to that, we undertook to indemnify our officers and directors up to an aggregate amount of $15,000,000.

For information relating to option granted to officers and directors, see "Item 6E. Share Ownership" in this annual report on Form 20-F.

On August 31, 2006, our shareholders approved an agreement with Dr. Michael Brunstein, our chairman of the board of directors. The term of engagement commenced as of June 19, 2006 and continues for an unlimited period, unless terminated in certain circumstances as stated in the agreement. Pursuant to the agreement, Dr. Brunstein is being paid a gross annual fee of $110,000 payable monthly in NIS and was granted options to purchase up to 150,000 ordinary shares under our Stock Option Plan No. 8. The employment agreement contains a change of control provision pursuant to which the vesting of the 150,000 options shall be accelerated in certain circumstances. For additional information regarding the compensation arrangements of the Company with Dr. Brunstein, see "Item 6B – Compensation" in this annual report on Form 20-F.

On October 25, 2007, our shareholders approved a new compensation arrangement for the Company's directors (excluding the external directors, the chairman of the board of directors and, unless approved otherwise, any other director who is also an employee of the Company), pursuant to which the director compensation package shall include the following items: (1) an annual payment of $12,000 (in an equivalent amount in NIS), however, not more than the annual payment allowed under the Companies Regulations (Rules Regarding Compensation and Expenses to an External Director), 2000, or the Regulations, in the case of dually listed companies; (2) the following payments (but in each case not more than the applicable payment allowed under the Regulations in the case of dually listed companies): (i) for each meeting that the director attends in person, an amount of $600 (in an equivalent amount in NIS); (ii) for each execution of a written consent in lieu of a meeting, an amount of $300 (in an equivalent amount in NIS); and (iii) for each meeting that the director attends by teleconference, an amount of $360 (in an equivalent amount in NIS); and (3) an annual grant of options to purchase up to 10,000 ordinary shares of the Company to be granted to each director on the date of each annual general meeting at which such director is elected or reelected. The exercise price of the options shall be determined pursuant to the Company's Equity Based Compensation Policy.

On September 25, 2008, our shareholders approved the same compensation arrangement as was approved to the other directors on October 25, 2007 for the Company's external directors. In addition, on September 25, 2008 our shareholders approved a one-time additional award of an option to purchase up to 10,000 ordinary shares to each of Mr. Dan Falk and Ms. Naama Zeldis, our external directors. The exercise price of the option was determined pursuant to the Company's Equity Based Compensation Policy.

In addition, on September 25, 2008, our shareholders approved an addition to the compensation package of Dr. Michael Brunstein, the chairman of our board of directors, of the following items: (i) an annual award of an option to purchase up to 10,000 ordinary shares to be granted to Dr. Brunstein on the date of each annual general meeting at which the chairman of the board of directors is elected or reelected. The exercise price of each option shall be determined pursuant to the Company's Equity Based Compensation Policy. The proposed terms of the options (i.e., the amount, exercise price and vesting schedule) are identical to the terms of the options currently granted to other directors on an annual basis; and (ii) a one-time additional award of an option to purchase up to 10,000 ordinary shares granted to Dr. Brunstein on September 25, 2008. The exercise price of the option was determined pursuant to the Company's Equity Based Compensation Policy.

On August 3, 2009, our audit committee and board of directors approved the Company's engagement with Bright View Systems Ltd., to license the use of certain optical instrumentation developed by the Company. Such approval was necessary in light of the fact that Dr. Giora Dishon was a director both of the Company and Bright-View. Dr. Dishon was at that time a shareholder of Bright-View and held less than 5% of its equity.

On June 24, 2010, our shareholders approved a biennial award of an option to purchase up to 75,000 ordinary shares to Dr. Michael Brunstein, the chairman of our board of directors, during his term as the chairman of the board of directors on the date of every other annual general meeting at which the chairman of the board is elected or reelected starting with the 2010 annual general meeting (and thereafter in 2012). The exercise price of each option shall be determined pursuant to the Company's Equity Based Compensation Policy. 25% of each option shall vest and become exercisable on the first anniversary of its grant date and thereafter 2.083% of each option shall vest and become exercisable at the end of each complete month following the first anniversary date. Accordingly, each option shall fully vest and become exercisable at the 4th anniversary date of its grant date. The above grant shall be in addition to the previously approved annual award of an option to purchase 10,000 of the Company's ordinary shares.

7.C Interest of Experts and Counsel

Not applicable.

Item 8. Financial Information

8.A Consolidated Statements and Other Financial Information

See "Item 17. Financial Statements" in this annual report on Form 20-F and pages F-1 through F-26.

Legal Proceedings

From time to time, we are a party to legal proceedings and claims in the ordinary course of business. We are not currently a party to any significant legal proceedings.

Dividend Policies

We anticipate that, for the foreseeable future, we will retain any earnings to support operations and to finance the growth and development of our business. Therefore, we do not expect to pay cash dividends for at least the next several years.

We obtained the status of “approved enterprise” under the Law for the Encouragement of Capital Investments, 1959, under which we may take advantage of certain tax exemptions. We may further obtain such status in the future. If we distribute a cash dividend from income which is tax exempt, we would have to pay corporate tax at a rate of up to 25% on the amount equal to the amount distributed and on the amount of corporate tax which would have been due in the absence of the tax exemption, in addition to withholding tax on such dividends paid. For further description of the conditions limiting our ability to declare and pay dividends see “Item 10E –Israeli Taxation” in this annual report on Form 20-F.

The distribution of dividends may also be limited by the Companies Law, which permits the distribution of dividends only out of retained earnings or earnings derived over the two most recent fiscal years, whichever is higher, provided that there is no reasonable concern that payment of a dividend will prevent a company from satisfying its existing and foreseeable obligations as they become due. Our Amended and Restated Articles of Association provide that dividends will be paid at the discretion of, and upon resolution by, our board of directors.

Export Sales

Substantially all of our products are sold to customers located outside Israel.

8.B Significant Changes

Not applicable.

Item 9. The Offer and Listing

9.A Offer and Listing Details

The information presented in the table below presents, for the periods indicated, the reported high and low market prices on The NASDAQ Global Market of our ordinary shares. The shares began trading on NASDAQ on April 11, 2000 at a price of $18 per share. Our ordinary shares were registered for trading on the Tel Aviv Stock Exchange in 2002, and the table below presents, for the periods indicated, the reported high and low market prices on the Tel Aviv Stock Exchange.

NASDAQ Global Market

	Price per share (US$)	
	High	Low
Yearly highs and lows		
2007	3.10	2.10
2008	2.55	0.41
2009	6.55	0.68
2010	8.48	3.63
2011	11.79	5.11
Quarterly highs and lows		
2010		
First quarter	6.72	4.23
Second quarter	6.19	3.63
Third quarter	6.89	3.86
Fourth quarter	8.48	5.47
2011		
First quarter	11.44	8.20
Second quarter	11.79	9.07
Third quarter	11.44	5.11
Fourth quarter	7.99	5.30
2012		
First quarter (until February 29, 2012)	9.19	7.15

Monthly highs and lows		
September 2011	7.07	5.11
October 2011	7.99	5.30
November 2011	7.2	5.48
December 2011	7.52	6.28
January 2012	8.91	7.15
February 2012	9.19	7.21

Tel Aviv Stock Exchange

	Price per share (NIS)	
	High	Low
Yearly highs and lows		
2007	13.75	8.50
2008	9.79	1.85
2009	24.24	1.53
2010	30.50	14.50
2011	40.99	20.00
Quarterly highs and lows		
2010		
First quarter	25.94	15.80
Second quarter	22.38	14.50
Third quarter	25.20	15.40
Fourth quarter	30.50	20.00
2011		
First quarter	40.99	29.20
Second quarter	40.27	31.20
Third quarter	37.90	21.07
Fourth quarter	28.65	20.00
2012		
First quarter (until February 29, 2012)	34.00	27.72
Monthly highs and lows		
September 2011	24.52	21.07
October 2011	28.58	20.00
November 2011	26.44	22.09
December 2011	28.65	23.57
January 2012	34.00	27.87
February 2012	34.00	27.72

9.B Plan of Distribution

Not applicable.

9.C Markets

Our ordinary shares are quoted on The NASDAQ Global Market and the Tel Aviv Stock Exchange under the symbol "NVMI."

9.D Selling Shareholders

Not applicable.

9.E Dilution

Not applicable.

9.F Expenses on the Issue

Not applicable.

Item 10. Additional Information

10.A Share Capital

Not applicable.

10.B Memorandum and Articles of Association

Set forth below is a summary of certain provisions of the Company's Amended and Restated Articles of Association, as adopted by the Company's shareholders on September 25, 2008, and Israeli law affecting shareholders of the Company. This summary does not purport to be complete and is qualified in its entirety by reference to our memorandum and Amended and Restated Articles of Association and such law. On September 25, 2008, our shareholders adopted the Amended and Restated Articles of Association of the Company (for the purposes of this Item, the "Amended Articles").

Registration. The Company was incepted and registered with the Israeli Registrar of Company's on May 17, 1993, under registration number 51-181-246-3.

Purpose of the Company. The purposes of the Company, as provided by Article 4 of our Amended Articles, are (a) to invent, design, plan, develop, manufacture, market and trade in the field of measuring instruments in electronics, micro-electronics, medicine, chemistry, metallurgy, ceramics and any other field, (b) to initiate, participate, manage, execute, import and export any kind of project within the borders of the State of Israel and/or outside Israel, (c) to register patents, trademarks, trade names intellectual property rights marketing rights and any other right of any kind whatsoever, both in Israel and abroad and (d) to engage in any legal activity, both in Israel and abroad.

Approval of Related Party Transaction; Corporate Borrowings. The Companies Law requires that office holders of a company, including directors and executive officers, promptly disclose to the board of directors any personal interest they may have and all related material information known to them about any existing or proposed transaction with such company. The approval of the board of directors is required for 'non-extraordinary transactions between a company and its office holders, or between a company and other persons in which an office holder has a personal interest, unless such company's articles of association provide otherwise. If a transaction is an "extraordinary transaction" it is subject to the approval of the audit committee prior to its approval by the board of directors. Transactions between a company and an office holder (who is not a director), regarding such office holder's terms of engagement with the company, including with respect to indemnification, insurance and exemptions, are subject the approval of the audit committee and the board of directors. Transactions between a company and its directors, regarding their terms of engagement with such company, including with respect to indemnification, insurance and exemptions, and with respect to their terms of engagement in other positions in the company, are subject to the approval of the audit committee, the board of directors and such company's shareholders.

In addition, an extraordinary transaction between a public company and a controlling shareholder (i.e. a shareholder who has the ability to direct the activities of a company, including a shareholder that owns 25% or more of the voting rights if no other shareholder owns more than 50% of the voting rights, but excluding a shareholder whose power derives solely from its position on the board of directors or any other position with the company), or in which a controlling shareholder has a personal interest, including a private placement in which the controlling shareholder has a personal interest, a transaction between a public company and a controlling shareholder, the controlling shareholders' relative, or entities under its control, directly or indirectly, with respect to services to be provided to the public company, and a transaction concerning the terms of compensation of the controlling shareholder or the controlling shareholder's relative, who is an office holder or an employee, require the approval of the audit committee, the board of directors and a majority of the shares voted by the shareholders of the company participating and voting on the matter in a shareholders' meeting. In addition, the shareholder approval must fulfill one of the following requirements: (i) the majority must include at least a majority of the shares of the voting shareholders who have no personal interest in the transaction (in counting the total votes of such shareholders, abstentions shall not be taken into account); or (ii) the total of opposition votes among the shareholders who have no personal interest in the transaction may not exceed 2% of the aggregate voting rights in the company. Any such transaction the term of which is more than three years, must be approved in the same manner every three years, unless the audit committee has determined that longer term is reasonable under the circumstances.

Under our Amended Articles, a transaction between the Company and an office holder and a transaction between the Company and a third person in which an office holder of the Company has a personal interest, which is not an extraordinary transaction (as defined in the Companies Law), will require only the approval of our board of directors or a committee authorized by our board of directors.

According to the Companies Law, if an extraordinary transaction is discussed by the board of directors or the audit committee, directors and office holders that have personal interest in the proposed transaction, may not participate in the discussion or vote. However, if the majority of the members of the audit committee or the board of directors (as applicable) have personal interest in the proposed transaction, then all directors (including those with personal interest) may participate in the discussion and vote, provided that in the event the majority of the members of the board of directors have personal interest in the transaction, said transaction shall also be subject to the approval of the Company's shareholders meeting.

Under regulations promulgated under the Companies Law regarding payment of compensation to external directors, compensation of external directors shall be comprised of annual compensation and a per meeting payment ranging as stated in the regulations. These amounts are adjusted twice a year in accordance with the Israeli consumer price index. With regard to a company, which shares are traded in an exchange outside of Israel, and is subject to laws which impose upon the external directors duties which exceed the duties imposed upon them under Israeli law, the maximum amount payable to the external directors is NIS 115,400 per annum and NIS 3,470 per meeting, as adjusted for changes in the Israeli CPI twice a year. The approval of the shareholders of the Company is required for such compensation, unless it is between the maximum and fixed amounts set forth in these regulations. Alternatively, the compensation of external directors may be linked to the compensation of other directors, subject to certain restrictions. Additionally, external directors may be entitled to compensation in stock (including by way of granting options to purchase the Company's stock), provided that such compensation is granted within the framework of a stock incentive plan applicable to all other directors and further provided the amount of stock granted or purchasable shall not fall below the lowest amount granted to any other director and shall not exceed the average amount of stock granted to all other directors. The regulations also allow an increased compensation to external directors that are considered "expert external directors" under the terms set forth in said regulations.

Share Capital. The Company currently has one class of ordinary shares, 0.01 NIS par value per share. The Amended Articles provide that the board of directors may decide on a distribution, subject to the provisions set forth under the Companies Law and the Amended Articles. Under the Companies Law, dividends may be paid out of net earnings, as calculated under that law, for the two years preceding the distribution of the dividend and retained earnings, provided that there is no reasonable concern that the dividend will prevent the company from satisfying its existing and foreseeable obligations as they become due. For more information, see the Company's balance sheet and the statement of shareholders' equity in the financial statements. Each ordinary share is entitled to one vote at all shareholders meetings.

Changes of Rights of Holders of the Shares. According to the Amended Articles, any change in the rights and privileges of the holders of any class of shares shall require the approval of a class meeting of such class of shares by a simple majority (unless otherwise provided by the Companies Law or the regulations thereto or by the terms of issue of the shares of that class).

Shareholders Meetings. An annual meeting shall be convened at least once every calendar year, and no later than 15 months after the preceding annual meeting, to review the Company's financial statements and to transact any other business required pursuant to the Amended Articles or to the Companies Law, and any other matter which the board of directors places on the agenda of the annual meeting, at a time and place that the board of directors shall determine. A special meeting may be called by the board of directors and at the demand of any of the following: two directors or one-quarter of the directors then serving; one or more shareholders who hold at least five per cent of the issued and outstanding capital stock and at least one percent of the voting rights in the Company; or one or more shareholders who hold at least five percent of the voting rights in the Company.

According to the Amended Articles, the quorum required for an ordinary meeting of shareholders is at least two shareholders present in person or by proxy who together hold or represent in the aggregate more than one third (33.33%) of the voting power. A meeting adjourned for lack of a quorum is adjourned one day thereafter at the same time and place or to such other day, time and place as our board of directors may indicate in a notice to the shareholders. At the reconvened meeting, the required quorum consists of any number of members present in person or by proxy, regardless of the number of shares represented. The Companies Law and regulations determine that prior notice of no less than 21 days should be given to the company's shareholders, prior to convening a meeting. In the event that the issue to be resolved is an issue subject to the Israeli proxy rules, a notice of no less than 35 days should be given to the company's shareholders. In some cases a prior notice of not less than 14 days may be given to the company's shareholders.

Subject to anti-terror legislations, there are no limitations on the rights of non-resident or foreign owners to hold or vote ordinary shares imposed under Israeli law or under the Amended Articles.

Board of Directors. The Amended Articles provide that directors may be elected either at our annual general meeting or a special meeting of shareholders by a vote of the holders of more than 50% of the total number of votes represented at such meeting. In addition, our board of directors is authorized to appoint directors, at its discretion, provided that the total number of directors shall not exceed the maximum number of directors permitted by the Amended Articles. Each of our directors (except our external directors) holds office until the next annual general meeting of shareholders. The Companies Law provides that a person, who is, directly or indirectly subordinated to the chief executive officer of a public company, may not serve as the chairman of its board of directors. In addition, neither the chief executive officer nor his relative is eligible to serve as chairman of the board of directors (and vice versa), unless such nomination was approved by a majority of the company's shareholder for a term not exceeding three years, and either: (i) such majority included at least two thirds of the voting shareholders (shares held by abstaining shareholders are not considered) which are not controlling shareholders and have not personal interest regarding the decision; or (ii) the aggregate number of shares voting against the proposal did not exceed 2% of company voting shareholders. The term can be extended for additional three year terms, in the same manner.

The Companies Law provides that Israeli public companies must have at least two external directors. External directors may be elected at our annual general meeting or a special meeting of our shareholders in a number and manner stipulated by the Companies Law, i.e., for an initial term of three years, which may be extended for two additional three-year terms (provided that the re-election for additional term was presented by the board of directors or by one or more shareholders that own, in the aggregate, 1% or more of the Company's outstanding share capital), and thereafter for additional three-year terms, if both the audit committee and the board of directors confirm that in light of the expertise and contribution of the external director, the extension of such external director's term would be in the interest of the Company. The election and re-election of external directors, requires the affirmative vote of a majority of the shares and in addition either that (i) a majority of the shares held by shareholders who are not controlling shareholders or a have personal interest in the election (other than a personal interest unrelated to the controlling shareholders) attending in person or represented by proxy have voted in favor of the proposal (shares held by abstaining shareholders shall not be considered) or (ii) the aggregate number of shares voting against the proposal held by such shareholders has not exceeded 2% of the company's voting shareholders. External directors may be removed from office only under the following circumstances: (i) an external director ceases to meet the legal requirements for appointment as an external director or breaches his or her fiduciary duty to the company and a resolution to remove such external director is made by the shareholders at a meeting at which such external director is granted a reasonable opportunity to express his position (such a resolution requires the same majority of votes that elected the external director); (ii) an external director ceases to meet the legal requirements for appointment as an external director or breaches his or her fiduciary duty to the Company and a court orders that such director be removed; or (iii) an external director is unable to perform his or her duties or is convicted of certain felonies and a court orders that such director be removed.

An external director is qualified for nomination as an external director, only if he/she has either professional qualifications or accounting and financial expertise. At least one of the external directors must have accounting and financial expertise. However, a company whose shares are traded in certain exchanges outside of Israel, including The NASDAQ Global Select Market, such as our company, is not required to nominate at least one external director who has accounting and financial expertise, as long as another independent director for audit committee purposes who has such expertise serves on the board of directors pursuant to the applicable foreign securities laws. In such case all external directors will have professional qualification.

Regulations adopted under the Companies Law provide that a director with accounting and financial expertise is a director that due to his education, experience and skills has high expertise and understanding in business-accounting matters and financial statements in a way that enables him to deeply understand the financial statements of the company and to facilitate discussion with respect to the way the financial data should be presented. The assessment of the accounting and financial expertise of a director shall be made by the board of directors, who shall take into consideration, inter alia, the education, experience and knowledge of the director in the following subjects:

(1) Accounting matters and audit accounting matters, which are typical to the sector in which the company works and of companies with the same size and complexity as of the company;

(2) The duties and obligations of the auditing accountant; and

(3) Preparing of financial statements and their approval according to applicable law, including securities law.

The regulations also provide that a director with professional qualifications is a director who meets one of the following conditions:

(1) A holder of an academic degree in one of the following: economics, business administration, accounting, law, or public administration;

(2) A holder of another academic degree or is otherwise a graduate of higher education in a major field of business of the company or in other field which is relevant to the role;

(3) He has experience of at least five years in one of the following, or that he has cumulative experience of at least five years in two or more of the following:

(a) A senior position in the business management of a corporation which has a significant scope of business;

(b) A senior public position or in a senior role in the public service; or

(c) A senior position in the company's major fields of business.

According to the Companies Law, the board of directors of a public company must establish the minimum number of board members that are to have accounting and financial expertise while considering, inter alia, the nature of the company, its size, the scope and complexity of its operations and the number of directors stated in the Amended Articles.

In April 2006, our board of directors resolved that the minimum number of board members that need to have accounting and financial expertise, including the external director with accounting and financial expertise, is one (1).

Our board of directors determined that each of Mr. Dan Falk and Ms. Naama Zeldis has accounting and financial expertise as described in the regulations promulgated pursuant to Companies Law, and that, therefore, the requirements of the minimum number of board members that need to have accounting and financial expertise, as set by the board of directors, has been met.

Under the Companies Law, the majority of the members of the audit committee must be independent directors. A public company may classify a director as independent only if (i) the audit committee has determined that he or she is qualified to serve as an external director (with the exception that such director does not have to have professional qualifications or accounting and financial expertise in order to serve as an independent director), and (ii) he or she is not serving as a director in the company for more than consecutive nine years (only a period of two or more years, in which such person did not serve as a director in the company, shall be deemed to discontinue the nine year sequence).A majority of our board members are independent, in accordance with NASDAQ Listing Rules and the Companies Law.

Changes in Capital. Our share capital may be increased or decreased by a vote of our shareholders in accordance with the Companies Law.

Acquisition of a Controlling Stake. According to the Companies Law, an acquisition pursuant to which a purchaser shall hold a "controlling stake", that is defined as 25% or more of the voting rights if no other shareholder holds a controlling stake, or an acquisition pursuant to which such purchaser shall hold more than 45% of the voting rights of the company if no other shareholder owns more than 45% of the voting rights, may not be performed by way of market accumulation, but only by way of a special tender offer (as defined in the Companies Law) made to all of the company's shareholders on a pro rata basis. A special tender offer may not be consummated unless a majority of the shareholders who announced their stand on such offer have accepted it (in counting the total votes of such shareholders, shares held by the controlling shareholders, shareholders who have personal interest in the offer, shareholders who own 25% or more of the voting rights in the company, relatives or representatives of any of the above or the bidder and corporations under their control, shall not be taken into account). A shareholder may be free to object to such an offer without such objection being deemed as a waiver of his right to sell its respective shares if the transaction is approved by a majority of the company's shareholders despite his objection. Shares purchased not in accordance with those provisions shall become “dormant shares” and shall not grant the purchaser any rights so long as they are held by the purchaser.

Acquisition. A person wishing to acquire shares or a class of shares of an Israeli public company and who would, as a result, own more than 90% of the target company’s issued and outstanding share capital or of certain class of its shares, is required by the Companies Law to make a full tender offer (as defined in the Companies Law) to all of the company’s shareholders for the purchase of all of the issued and outstanding shares of the company or class of shares. If either (i) the shareholders who do not accept the offer hold, in the aggregate, less than 5% of the issued and outstanding share capital of the company or of the applicable class, and more than half of the shareholders who do not have a personal interest in the offer accept the offer, or (ii) the shareholder who do not accept the offer hold less than 2% of the issued and outstanding share capital of the company or of the applicable class, then all of the shares that the acquirer offered to purchase will be transferred to the acquirer by operation of law. However, a shareholder that had its shares so transferred, whether or not it accepted the tender offer (unless otherwise provided in the offering memorandum), may, within six months from the date of acceptance of the tender offer, petition the court to determine that the tender offer was for less than fair value and that the fair value should be paid as determined by the court. If the shareholders who did not accept the tender offer hold at least 5% of the issued and outstanding share capital of the company or of the applicable class of shares, the acquirer may not acquire shares of the company that will increase its holdings to more than 90% of the company’s issued and outstanding share capital or of the applicable class from shareholders who accepted the tender offer.

The Companies Law provides that corporate mergers require the approval of both companies' boards of directors and shareholders. In the event, however, that shares of the target company are held by the acquiring company or by a person holding 25% or more of any type of controlling means of the acquiring company, the merger will not be approved if a majority of the shareholders of the target company attending and voting at the meeting at which the merger is considered (without taking into account, for that purpose, the shares held by the acquiring company or by a person holding 25% or more of any type of controlling means of the acquiring company) object to and do not vote in favor of the merger. If a person holds 25% or more of any type of controlling means of more than one merging company, the same provisions shall apply with regard to the shareholders' vote with respect to each such company. Upon the request of a creditor of either party to the proposed merger, the court may delay or prevent the merger if the court concludes that there exists a reasonable concern that as a result of the merger the surviving company will be unable to satisfy the target company's obligations. Furthermore, a merger may not close unless at least 30 days have passed from the time that the general meeting of each of the merging companies was held and at least 50 days have passed from the date on which the merger proposal was sent to the Israeli Registrar of Companies.

In addition, the Companies Law preserves provisions of its predecessor, the Companies Ordinance, dealing with arrangements between a company and its shareholders. These arrangements 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 at least 75% of the shares of participating shareholders and a majority of the shareholders voting at a shareholders meeting. In addition to shareholder approval, court approval of the transaction is required, which entails further delay.

A merger, the acquisition of a controlling stake or any transaction in which all or substantially all the assets of a company are de facto transferred to another company, may require the approval of the Israeli Commissioner of Restrictive Trade Practices, in the event that the aggregate annual sales volume in Israel of all the companies which are parties to such transaction in the year preceding the merger, exceeds NIS 150 million (approximately $39.6 million), adjusted annually to the Israeli consumer price index, and the annual sales volume in Israel of at least two of the companies which are parties to such transaction exceeds NIS 10 million each (approximately $2.64), and also if after the consummation of such transactions, the joint market, in Israel, or at any identified geographic part of Israel will be in excess of 50% with respect to such products and services.

10.C Material Contracts

On February 4, 2010, we entered into an Underwriting Agreement with Needham & Company, LLC and Roth Capital Partners LLC, for the sale of 3,850,000 ordinary shares of the company, with an additional 577,500 ordinary shares to be sold pursuant to an overallotment option. On February 9, 2010, we successfully consummated an underwritten public follow-on offering of 4,427,500 ordinary shares (which amount of shares included ordinary shares sold pursuant to the overallotment option) at a price per ordinary share of $4.15, in consideration of approximately $17.0 million, net.

10.D Exchange Controls

Non-residents of Israel who purchase our ordinary shares outside of Israel with U.S. dollars or other foreign currency will be able to convert dividends (if any) thereon, and any amounts payable upon the dissolution, liquidation or winding up of the affairs of the Company, as well as the proceeds of any sale in Israel of the ordinary shares to an Israeli resident, into freely repatriable dollars, at a rate of exchange prevailing at the time of conversion, pursuant to regulations issued under the Currency Control Law, 1978, provided that Israeli income tax has been withheld by the Company with respect to such amounts. Israeli residents are eligible to purchase securities of certain companies, including our ordinary shares, if they are listed on a foreign exchange in a designated country, which is defined to include the NASDAQ.

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10.E Taxation

Israeli Taxation

The following is a summary of the material Israeli tax laws applicable to us, and some Israeli Government programs benefiting us. This section also contains a discussion of some Israeli tax consequences to persons owning our ordinary shares. 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 a new tax legislation which has not been subject to judicial or administrative interpretation. The discussion should not be construed as legal or professional tax advice and does not cover all possible tax considerations.

SHAREHOLDERS ARE URGED TO CONSULT THEIR OWN TAX ADVISORS AS TO THE 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.

General Corporate Tax Structure in Israel

Israeli companies are generally subject to corporate tax on their taxable income at the rate of 24% for the 2011 tax year. Prior to the enactment of the Law for Changing the Tax Burden in Israel (the "Tax Change Law"), the corporate tax rates were scheduled to be reduced to 23% in 2012 and ultimately to 18% by 2016. This scheduled gradual reduction in corporate tax rates was repealed. Instead, the Tax Change Law provides that the corporate tax rate will be increased to 25% in 2012.

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

Tax benefits prior to the 2005 Amendment

The Law for the Encouragement of Capital Investments, 1959, generally referred to as the “Investments Law ”, provides that a capital investment in eligible facilities may, upon application to the Investment Center of the Ministry of Industry, Trade and Labor of the State of Israel the (“Investment Center ”), be granted the status of an Approved Enterprise. Each certificate of approval for an Approved Enterprise relates to a specific investment program delineated both by its financial scope, including its capital sources, and by its physical characteristics, e.g., the equipment to be purchased and utilized pursuant to the program.

A company owning an Approved Enterprise is eligible for a combination of grants and tax benefits (the “Grant Track”). The tax benefits under the Grant Track include accelerated depreciation and amortization for tax purposes, as well as the taxation of income generated from an Approved Enterprise at the maximum corporate tax rate of 25%, for a certain period of time. The benefit period is ordinarily seven years commencing with the year in which the Approved Enterprise first generates taxable income. The benefit period is limited to 12 years from the earlier of the commencement of production by the Approved Enterprise or 14 years from the date of approval of the Approved Enterprise.

The tax benefits under the Investments Law also apply to income generated by a company from the grant of a usage right with respect to know-how developed pursuant to the Approved Enterprise, income generated from royalties, and income derived from a service which is auxiliary to such usage right or royalties, provided that such income is generated within the ordinary course of business of the company investing in the Approved Enterprise. If a company has more than one approval or only a portion of its capital investments are approved, its effective tax rate is the result of a weighted average of the applicable rates. The Tax Benefits under the Investments Law are not, generally, available with respect to income derived from products manufactured outside of Israel. In addition, the Tax Benefits available to a company investing in an Approved Enterprise are contingent upon the fulfillment of conditions stipulated in the Investments Law and related regulations and the criteria set forth in the specific certificate of approval, as described above. In the event that a company does not meet these conditions, it would be required to refund the amount of tax benefits, plus a consumer price index linked adjustment and interest.

A company which qualifies as a foreign investment company (a “FIC”) will be eligible for a three-year extension of tax benefits following the expiration of the seven-year period referenced above. In addition, in the event that the level of foreign ownership in an Approved Enterprise reaches 49% or higher, the corporate tax rate applicable to income earned from the Approved Enterprise is reduced as follows:

% of Foreign Ownership	Tax Rate
49% or more but less than 74%	20%
74% or more but less than 90%	15%
90% or more	10%

A company qualifies as a FIC if (i) it has received at least NIS 5 million in loans (for a minimum period of three years) or as investment in share capital from a foreign resident who is consequently entitled to at least 25% of the “rights” in the company (consisting of profit sharing rights, voting rights and appointment of directors) , or (ii) if a foreign resident has purchased the company’s shares from an existing shareholder, consequently entitling the foreign shareholder to at least 25% of such rights in the company provided that the company’s outstanding and paid-up share capital exceeds NIS 5 million.

Additionally, a company owning an Approved Enterprise on or after April 1, 1986, may elect to forgo its entitlements to grants and tax benefits under the Grant Track and apply for alternative package of tax benefits for a benefit period of between seven and ten years (the “Alternative Track”). Under the Alternative Track, a company’s undistributed income derived from the Approved Enterprise will be exempt from corporate tax for a period of between two and ten years, starting from the first year the company derives taxable income under the Approved Enterprise program. The length of time of this exemption will depend on the geographic location of the Approved Enterprise within Israel and the type of the approved enterprise. After the exemption period lapses, the company will be eligible for the reduced tax rate of 25% (or a lower rate in the case of a FIC) for the remainder of the benefit period.

The Company has elected to be taxed under the Alternative Track. A company that has elected the Alternative Track and subsequently pays a dividend out of income derived from the Approved Enterprise during the tax exemption period will be subject to corporate tax on the amount which is determined by the distributed amount grossed up with the effective corporate tax rate which would have been applied had the company not elected the Alternative Track, which is at referred above ranged between 10%-25%. Dividends paid out of income derived from an Approved Enterprise are generally subject to withholding tax at source at the reduced rate of 15%, if the dividend is distributed during the tax exemption period or within 12 years thereafter. In the event, however, that the company qualifies as a FIC, there is no such time limitation.

Under the Alternative Track, dividends paid by a company are considered to be attributable to income received from the entire company and the company’s effective tax rate is the result of a weighted average of the various applicable tax rates, excluding any tax-exempt income. Under the Investments Law, a company that has elected the Alternative Track is not obliged to distribute retained profits, and may generally decide from which year’s profits to declare dividends

We currently intend to reinvest any income derived from our Approved Enterprise program and not to distribute such income as a dividend.

Tax benefits under the 2005 Amendment

An amendment to the Investments Law, which effective as of April 1, 2005, has changed certain provisions of the Investments Law. An eligible investment program under the Amendment qualifies for benefits as a “Benefited Enterprise” (rather than as an Approved Enterprise which status is still applicable for investment programs approved prior to December 31, 2004 and/or investment programs under the Grant Track). According to the amendment, only Approved Enterprises receiving cash grants require the prior approval of the Investment Center.

The duration of the tax benefits described herein is limited to the earlier of seven or ten years (depending on the geographic location of the Approved Enterprise within Israel) from the Commencement Year (as described below) or 12 years from the first day of the Year of Election. Commencement Year is defined as the later of the first tax year in which a company had derived liable income for tax purposes from the Benefited Enterprise, or the year of election which is the year in which a company requested to have the tax benefits apply to the Benefited Enterprise. The tax benefits granted to a Benefited Enterprise are determined, depending on the geographic location of the Benefited Enterprise within Israel, according to one of the following, which may be applicable to us:

(i) Similar to the currently available Alternative Track, exemption from corporate tax may be available on undistributed income for a period of two to ten years, depending on the geographic location of the Benefited Enterprise within Israel, and a reduced corporate tax rate of 10% to 25% for the remainder of the benefit period, depending on the level of foreign investment in each year. Benefits may be granted for a term of seven to ten years, depending on the level of foreign investment in the company. If the company pays a dividend out of income derived from the Benefited Enterprise during the tax exemption period, such income will be subject to deferred corporate tax with respect to the amount distributed (grossed up with the effective corporate tax rate which would have applied had the company not enjoyed the exemption) at the rate which would have applied had such company had the status of a Benefited Enterprise. The company is required to withhold tax on such distribution at a rate of 15%; or

(ii) A special track which enables companies owning facilities in certain geographical locations in Israel to pay corporate tax at a flat rate of 11.5% on income the Benefited Enterprise (the "Ireland Track"). The benefit period is for ten years. Upon payment of dividends, the company is required to withhold tax on such dividend at a rate of 15% for Israeli residents and at a rate of 4% for foreign residents.

Generally, a company that is Abundant in Foreign Investment (owned by at least 74% foreign shareholders and has undertaken to invest a minimum sum of $20 million in the Benefited Enterprise) is entitled to an extension of the benefit period by an additional five years, depending on the rate of its income that is derived in foreign currency.

As a result of the amendment, 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 deferred tax liability with respect to such tax-exempt income.

Currently, we have three Approved Enterprise plans under the Investments Law, which entitle us to certain tax benefits. Each of these Approved Enterprises is under the Alternative Track, which allows us, inter alia, a two year period of exemption of taxes for undistributed income pertaining to these enterprises. Some of these plans have already expired (before their benefits were utilized). In 2011, based on Company investments in property and equipment in the years 2009 and 2008, the Company submitted a request to approve a new plan (fourth plan) as an Approved Enterprise in accordance with the Amendment to the Investment Law. The commencing year was 2010. The expected expiration year is 2021.

To date, the Company has not had earnings attributable to Approved Enterprise programs.

On December 29, 2010, the Israeli Parliament approved an amendment to the Investment Law (the "New Amendment"). The New Amendment significantly revising the tax incentive regime in Israel, commencing on January, 1 2011.

The New Amendment introduced a new status of "Preferred Enterprise", replacing the existed status of "Benefited Enterprise". Similarly to "Beneficiary Company", a Preferred Company is an industrial company meeting certain conditions (including a minimum threshold of 25% export). However, under the New Amendment the requirement for a minimum investment in productive assets in order to be eligible for the benefits granted under the Investments Law as with respect to "Benefited Enterprise" was cancelled.

A Preferred Company is entitled to a reduced flat tax rate with respect to the income attributed to the Preferred Enterprise, at the following rates:

Tax Year	Development Region "A"	Other Areas within Israel
2011-2012	10%	15%
2013-2014	7%	12.5%
2015 onwards	6%	12%

In addition, the New Amendment introduced a new status of "Special Preferred Company" which is an Industrial company meeting, in addition to the conditions prescribed for "Preferred Company" certain additional conditions (including that the total preferred enterprise income of the preferred enterprise is at least NIS 1.5 billion in the given tax year). The tax rate applicable for a period of 10 years to income generated by such an enterprise will be reduced to 5%, if located in Development Region "A", or to 8%, if located in other area within the State of Israel.

Dividends distributed from income which is attributed to a "Preferred Enterprise" or a "Special Preferred Enterprise" will be subject to withholding tax at source at the following rates: (i) Israeli resident corporations – 0%, (ii) Israeli resident individuals – 15% (iii) non-Israeli residents - 15%, subject to a reduced tax rate under the provisions of an applicable double tax treaty.

The New Amendment also revised the Grant Track to apply only to approved programs located in Development Region “A” and shall provide not only cash grants (as prior to the Amendment) but also the granting of loans. The rates for grants and loans shall not be fixed but up to 20% of the amount of the approved investment (may be increased with additional 4%). In addition, a company owning a Preferred Enterprise under the Grant Track may be entitled also to the tax benefits which are prescribed for a Preferred Company.

The provisions of the New Amendment shall not apply to existing “Benefited Enterprises” or “Approved Enterprises”, which will continue to be entitled to the tax benefits under the Investment Law, as has been in effect prior to the New Amendment, unless the company owning such enterprises had made an election to apply the provisions of the New Amendment (such election cannot be later rescinded), which is to be filed with the Israeli Tax Authority, not later than the date prescribed for the filing of the company’s annual tax return for the respective year,. A company owning a Benefited Enterprise or Approved Enterprise which made such election by July 30, 2015, will be entitled to distribute income generated by the Approved/Benefited Enterprise to its Israeli corporate shareholders tax free.

Law for the Encouragement of Industry (Taxes), 1969

We believe that we qualify as an “Industrial Company” within the meaning of the Law for the Encouragement of Industry (Taxes), 1969, or the Industry Encouragement Law. The Industry Encouragement Law defines “Industrial Company” as an Israeli resident company, of which 90% or more of its income in any tax year (exclusive of income from certain defense loans), capital gains, interest and dividends is generated from an “Industrial Enterprise” that it owns. An “Industrial Enterprise” is defined as an enterprise whose principal activity in a given tax year is industrial manufacturing.

An Industrial Company is entitled to certain tax benefits, including: (i) a deduction of the cost of purchases of patents, know-how and certain other intangible property rights (other than goodwill) used for the development or promotion of the Industrial Enterprise over a period of eight years, beginning from the year in which such rights were first used, (ii) the right to elect to file consolidated tax returns with additional Israeli Industrial Companies controlled by it, and (iii) the right to deduct expenses related to public offerings in equal amounts over a period of three years beginning from the year of the offering.

Eligibility for benefits under the Encouragement of Industry Law is not contingent upon the approval of any governmental authority.

There is no assurance that we qualify or will continue to qualify as an Industrial Company or that the benefits described above will be available in the future.

Taxation of the Company Shareholders

Capital Gains

Capital gain tax is imposed on the disposal of capital assets by an Israeli resident, and on the disposal of such assets by a non- Israel resident if those assets are either (i) located in Israel; (ii) are shares or a right to a share in an Israeli resident corporation, or (iii) represent, directly or indirectly, rights to assets located in Israel. The Israeli Income Tax Ordinance of 1961 (New Version) (the "Ordinance") distinguishes between “Real Gain” and the “Inflationary Surplus”. Real Gain is the excess of the total capital gain over Inflationary Surplus computed generally on the basis of the increase in the Israeli CPI between the date of purchase and the date of disposal.

As of 2012, the capital gain accrued by individuals on the sale of our ordinary shares will be taxed at the rate of 25% (up from 20% in 2011) due to the enactment of the Tax Change Law, which came into force in January 1, 2012. However, if the individual shareholder is a “Controlling Shareholder” (i.e., a person who holds, directly or indirectly, alone or together with another, 10% or more of one of the Israeli resident company’s means of control) at the time of sale or at any time during the preceding 12 months period, such gain will be taxed at the rate of 30% (up from 25% in 2011).

The real capital gain derived by corporations will be generally subject to a corporate tax rate of 25% in 2012 (up from 24% in 2011).

Individual and corporate shareholder dealing in securities in Israel are taxed at the tax rates applicable to business income - 25% for corporations in 2012 (up from 24% in 2011) and a marginal tax rate of up to 48% in 2012 (up from 45% in 2011) for individuals. Notwithstanding the foregoing, capital gain derived from the sale of our ordinary shares by a non-Israeli shareholder may be exempt under the Ordinance from Israeli taxation provided that the following cumulative conditions are met: (i) the shares were purchased upon or after the registration of the securities on the stock exchange (this condition shall not apply to shares purchased on or after January 1, 2009), (ii) the seller does not have a permanent establishment in Israel to which the derived capital gain is attributed, and (iii) if the seller is a corporation, less than 25% of its means of control are held, directly and indirectly, by Israeli resident shareholders. In addition, the sale of shares may be exempt from Israeli capital gain tax under the provisions of an applicable tax treaty. For example, the U.S.-Israel Double Tax Treaty exempts U.S. resident from Israeli capital gain tax in connection with such sale, provided (i) the U.S. resident owned, directly or indirectly, less than 10% of an Israeli resident company's voting power at any time within the 12 month period preceding such sale; (ii) the seller, being an individual, is present in Israel for a period or periods of less than 183 days at the taxable year; and (iii) the capital gain from the sale was not derived through a permanent establishment of the U.S. resident in Israel.

Either the purchaser, the Israeli stockbrokers or financial institution through which the shares are held is obliged, subject to the above mentioned exemptions, to withhold tax upon the sale of securities from the real capital gain at the rate of 25% in respect of a corporation and/or an individual (the withholding tax rate applicable to individuals had been 20% in 2011).

At the sale of securities traded on a stock exchange a detailed return, including a computation of the tax due, must be filed and an advanced payment must be paid on January 31 and June 31 of every tax year in respect of sales of securities made within the previous six months. However, if all tax due was withheld at source according to applicable provisions of the Ordinance and regulations promulgated thereunder the aforementioned return need not be filed and no advance payment must be paid. Capital gain is also reportable on the annual income tax return.

Dividends

We have never paid cash dividends. A distribution of dividend by our company from income attributed to an Approved Enterprise/Benefited Enterprise/Preferred Enterprise will be generally subject to withholding tax in Israel at the following tax rates: Israeli resident individuals - 15%; Israeli resident companies – 0% for a Preferred Enterprise and 15% for an Approved Enterprise/Benefited Enterprise; Non-Israeli residents – 15% (or 4% under the Ireland Track), subject to a reduced rate under the provisions of any applicable double tax treaty. As of January 1, 2012, a distribution of dividends from income, which is not attributed to an Approved Enterprise/Benefited Enterprise/Preferred Enterprise to an Israeli resident individual, will generally be subject to income tax at a rate of 25%. However, a 30% tax rate will apply if the dividend recipient is a “Controlling Shareholder” (as defined above) at the time of distribution or at any time during the preceding 12 months period. If the recipient of the dividend is an Israeli resident corporation, such dividend will be exempt from income tax provided the income from which such dividend is distributed was derived or accrued within Israel.

As of January 1, 2012, the Ordinance provides that a non-Israeli resident (either individual or corporation) is generally subject to an Israeli income tax on the receipt of dividends at the rate of 25% (30% if the dividends recipient is a “Controlling Shareholder” (as defined above), at the time of distribution or at any time during the preceding 12 months period); those rates are subject to a reduced tax rate under the provisions of an applicable double tax treaty. Thus, under the U.S.-Israel Double Tax Treaty the following rates will apply in respect of dividends distributed by an Israeli resident company to a U.S. resident: (i) if the U.S. resident is a corporation which holds during that portion of the taxable year which precedes the date of payment of the dividend and during the whole of its prior taxable year (if any), at least 10% of the outstanding shares of the voting stock of the Israeli resident paying corporation and not more then 25% of the gross income of the Israeli resident paying corporation for such prior taxable year (if any) consists of certain type of interest or dividends – the tax rate is 12.5%, (ii) if both the conditions mentioned in section (i) above are met and the dividend is paid from an Israeli resident company’s income which was entitled to a reduced tax rate applicable to an Approved Enterprise Benefited Enterprise/Preferred Enterprise – the tax rate is 15%, and (iii) in all other cases, the tax rate is 25%. The aforementioned rates under the Israel U.S. Double Tax Treaty will not apply if the dividend income was derived through a permanent establishment of the U.S. resident in Israel.

Our company is obligated to withhold tax, upon the distribution of a dividend attributed to an Approved Enterprise's/Benefited Enterprise's/Preferred Enterprise's income, from the amount distributed, at the following rates: (i) Israeli resident corporations – 0% to a Preferred Enterprise or 15% to an Approved Enterprise/Benefited Enterprise, (ii) Israeli resident individuals – 15%, and (iii) non-Israeli residents – 15% (4% under the Ireland Track), subject to a reduced tax rate under the provisions of an applicable double tax treaty. If the dividend is distributed from income not attributed to the Approved Enterprise/Benefited Enterprise/Preferred Enterprise, the following withholding tax rates will apply: (a) for securities registered and held by a clearing corporation: (i) Israeli resident corporations – 0%, (ii) Israeli resident individuals – 25%, and (iii) non-Israeli residents - 25%, subject to a reduced tax rate under the provisions of an applicable double tax treaty; (b) in all other cases: (i) Israeli resident corporations – 0%, (ii) Israeli resident individuals – 25%/30% (the 30% tax rate shall apply if the dividend recipient is a "controlling shareholder" (as defined above) at the time of the distribution or at any time during the preceding 12 months period)), and (iii) non-Israeli residents - 25%/30% as referred to above with respect to Israeli resident individuals, subject to a reduced tax rate under the provisions of an applicable double tax treaty.

Foreign Exchange Regulations

Non-residents of Israel who hold our ordinary shares are able to receive any dividends, and any amounts payable upon the dissolution, liquidation and winding up of our affairs, repayable in non-Israeli currency at the rate of exchange prevailing at the time of conversion. However, Israeli income tax is generally required to have been paid or withheld on these amounts. In addition, the statutory framework for the potential imposition of currency exchange control has not been eliminated, and may be restored at any time by administrative action.

U.S. Taxation

The following discussion describes certain material United States ("U.S.") federal income tax consequences of the purchase, ownership and disposition of our ordinary shares.

For purposes of this discussion, a "U.S. holder" is a beneficial owner of ordinary shares who or which is any of the following for U.S. federal income tax purposes:

- a citizen or resident of the U.S. or someone treated as a U.S. citizen or resident of the U.S.;
- a corporation (or another entity taxable as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the U.S., any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust, if (a) a U.S. court 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 (b) the trust was in existence and treated as a U.S. person on August 20, 1996 and has a valid election in effect under applicable Treasury Regulations (as defined below) to be treated as a U.S. person.

This summary is for general information purposes only and does not purport to be a comprehensive description of all of the U.S. federal income tax considerations that may be relevant to a decision to purchase, hold or dispose of the Company's ordinary shares. This summary generally considers only U.S. holders that will own the ordinary shares as capital assets and does not consider the U.S. tax consequences to a person that is not a U.S. holder or the tax treatment of persons who hold the ordinary shares through a partnership or other pass-through entity. In addition, the possible application of U.S. federal estate or gift taxes or any aspect of state, local or non-U.S. tax laws is not considered. This discussion is based on current provisions of the Internal Revenue Code of 1986, as amended (the "Code"), Treasury Regulations promulgated under the Code by the U.S. Treasury Department (including proposed and temporary regulations) (the "Treasury Regulations"), rulings, current administrative interpretations and official pronouncements by the Internal Revenue Service (the "IRS"), and judicial decisions, all as currently in effect and all of which are subject to differing interpretations or to change, with a retroactive effect. Such changes could materially and adversely affect the tax consequences described below. No assurance can be given that the IRS would not assert, or that a court would not sustain, a position contrary to any of the tax consequences described below.

This discussion does not address all aspects of U.S. federal income taxation that may be relevant to any particular U.S. holder based on the holder's particular circumstances, such as,

- persons who own, directly, indirectly or constructively, 10% or more (by voting power or value) of our outstanding voting shares;
- persons who hold the ordinary shares as part of a hedging, straddle or conversion transaction;

- persons whose functional currency is not the U.S. dollar;
- persons who acquire their ordinary shares in a compensatory transaction;
- broker-dealers;
- insurance companies;
- regulated investment companies;

- real estate investment companies;
- traders who elect to mark-to-market their securities;
- tax-exempt organizations;
- banks or other financial institutions;
- U.S. expatriates; and
- persons subject to the alternative minimum tax.

HOLDER RELIANCE ON TAX STATEMENTS

THIS SUMMARY OF MATERIAL UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS IS FOR GENERAL INFORMATION ONLY AND IS NOT TAX ADVICE. EACH HOLDER SHOULD CONSULT ITS TAX ADVISOR WITH RESPECT TO THE PARTICULAR TAX CONSEQUENCES TO IT OF AN INVESTMENT IN THE ORDINARY SHARES, INCLUDING THE EFFECTS OF APPLICABLE UNITED STATES FEDERAL INCOME TAX LAWS AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER THE UNITED STATES FEDERAL ESTATE OR GIFT TAX RULES OR UNDER THE LAWS OF ANY FOREIGN, STATE OR LOCAL JURISDICTION OR UNDER ANY APPLICABLE TAX TREATY.

Availability of Reduced Tax Rates

U.S. legislation reduced to 15% the maximum U.S. Federal income tax rate on certain long-term capital gains and on qualifying dividends. Long-term capital gains from the sale of our ordinary shares may be eligible for this reduced rate, although the actual rates may be higher due to the phase out of certain tax deductions, exemptions and credits. After 2012, the maximum rate on long-term capital gains is scheduled to be 20%. Subject to the discussion below, dividends, if any, may also be eligible for this reduced rate, provided that we do not constitute a passive foreign investment company (a “PFIC”). However, tax rates are subject to change, especially given the uncertain economic conditions in the United States and the size of the federal deficit. U.S. holders should consult their tax advisors.

Distributions on the Ordinary Shares

We currently do not intend to pay dividends for at least the next several years. However, if we make any distributions of cash or other property to a U.S. holder of our ordinary shares, the amount of the distribution for U.S. federal income tax purposes will equal the amount of cash and the fair market value of any property distributed and will also include the amount of Israeli taxes withheld, if any, as described above under “— Dividends”. In general (and subject to the PFIC rules discussed below), any distribution paid by us on the ordinary shares to a U.S. holder will be treated as dividend income if the distribution does not exceed our current or accumulated earnings and profits, as determined for U.S. federal income tax purposes. If holding period and other requirements are met, dividends paid to non-corporate U.S. holders in taxable years beginning no later than December 31, 2012 should generally qualify for the reduced maximum tax rate of 15% as long as our common shares remain “readily tradable on an established securities market in the United States,” provided that we are not considered a PFIC (as discussed below) in the taxable year in which the dividend is paid or in any preceding taxable year. The amount of any distribution which exceeds these earnings and profits will be treated first as a non-taxable return of capital, reducing the U.S. holder’s tax basis in its ordinary shares to the extent thereof, and then as capital gain, and as long-term capital gain if the U.S. holder’s holding period exceeds one year, from the deemed disposition of the ordinary shares (subject to the PFIC rules discussed below). Corporate holders generally will not be allowed a deduction for dividends received on the ordinary shares.

A dividend paid by us in NIS will be included in the income of U.S. holders at the U.S. dollar value of the dividend, based upon the spot rate of exchange in effect on the date of the distribution. U.S. holders will have a tax basis in NIS for U.S. federal income tax purposes equal to that U.S. dollar value. Any subsequent gain or loss resulting from exchange rate fluctuations between the day the dividend was included in the income of U.S. holders and the day the NIS are converted into U.S. dollars or are otherwise disposed of, will be taxable as ordinary income, gain or loss from U.S. sources.

Dividends paid by us generally will be foreign source “passive income” for U.S. foreign tax credit purposes or, in the case of a U.S. holder that is a financial services entity, “financial services income.” U.S. holders may elect to claim as a foreign tax credit against their U.S. federal income tax liability the Israeli income tax withheld from dividends received on the ordinary shares. The Code provides limitations on the amount of foreign tax credits that a U.S. holder may claim. U.S. holders that do not elect to claim a foreign tax credit may instead claim a deduction for Israeli income tax withheld, but only for a year in which these U.S. holders elect to do so for all foreign income taxes. The rules relating to foreign tax credits are complex (and may also be impacted by the tax treaty between the United States and Israel), and you should consult your tax advisor to determine whether and if you would be entitled to this credit.

Sale or Exchange of the Ordinary Shares

Upon the sale or exchange of the ordinary shares (subject to the PFIC rules discussed below), a U.S. holder generally will recognize capital gain or loss in an amount equal to the difference between the amount realized on the sale or exchange and the U.S. holder's tax basis in the ordinary shares. The gain or loss recognized on the sale or exchange of the ordinary shares generally will be long-term capital gain or loss if the U.S. holder's holding period of the ordinary shares is more than one year at the time of the disposition.

Gain or loss recognized by a U.S. holder on a sale or exchange of ordinary shares generally will be treated as U.S. source income or loss for U.S. foreign tax credit purposes. Under the tax treaty between the United States and Israel, gain derived from the sale, exchange or other disposition of ordinary shares by a holder who is a resident of the U.S. for purposes of the treaty and who sells the ordinary shares within Israel may be treated as foreign source income for U.S. foreign tax credit purposes.

Passive Foreign Investment Companies

In general, a foreign (i.e., non-U.S.) corporation will be a PFIC for any taxable year in which, after applying the relevant look-through rules with respect to the income and assets of its subsidiaries, either (1) 75% or more of its gross income in the taxable year is "passive income," or (2) assets held for the production of, or that produce, passive income comprise 50% or more of the average of its total asset value in the taxable year. For purpose of the income test, passive income includes dividends, interest, royalties, rents, annuities and net gains from the disposition of assets, which produce passive income. For purposes of the assets test, assets held for the production of passive income includes assets held for the production of, or that produce dividends, interest, royalties, rents, annuities, and other income included in the income test. In determining whether we meet the assets test, cash is considered a passive asset and the total value of our assets generally will be treated as equal to the sum of the aggregate fair market value of our outstanding stock plus our liabilities. If we own at least 25% (by value) of the stock of another corporation, we will be treated, for purposes of the PFIC tests, as owning our proportionate share of the other corporation's assets and receiving our proportionate share of the other corporation's income. The income test is conducted at the taxable year-end. The asset test is conducted on a quarterly basis and the quarterly results are then averaged together.

If a corporation is treated as a PFIC for any year during a U.S. holder's holding period and the U.S. holder does not timely elect to treat the corporation as a "qualified electing fund" under Section 1295 of the Code or elect to mark its ordinary shares to market (both as described below), any gain on the disposition of the shares will be treated as ordinary income, rather than capital gain, and the holder will be required to compute its tax liability on that gain, as well as on dividends and other distributions, as if the income had been earned ratably over each day in the U.S. holder's holding period for the shares. The portion of the gain and distributions allocated to prior taxable years in which a corporation was a PFIC will be ineligible for any preferential tax rate otherwise applicable to any "qualified dividend income" or capital gains, and will be taxed at the highest ordinary income tax rate in effect for each taxable year to which this portion is allocated. An interest charge will be imposed on the amount of the tax allocated to these taxable years. A U.S. holder may elect to treat a corporation as a qualified electing fund only if the corporation complies with requirements imposed by the IRS to enable the shareholder and the IRS to determine the corporation's ordinary income and net capital gain. Additionally, if a corporation is a PFIC, a U.S. holder who acquires shares in the corporation from a decedent will be denied the normally available step-up in tax basis to fair market value for the shares at the date of death and instead will have a tax basis equal to the decedent's tax basis if lower than fair market value. These adverse tax consequences associated with PFIC status could result in a material increase in the amount of tax that a U.S. holder would owe and an imposition of tax earlier than would otherwise be imposed and additional tax form filing requirements. Unless otherwise provided by the IRS, if a corporation is classified as a PFIC, a U.S. holder will generally be required to file an informational return annually to report its ownership interest in such entity.

Status of Nova as a PFIC. Under the income test, less than 75% of our gross income was passive income in 2011. For 2011, while we continued to have substantial amounts of cash and short-term deposits and the market value of our ordinary shares continued to be volatile, a determination of the value of our assets by reference to the average market value of our ordinary shares and our liabilities results in a conclusion that the average value of our passive assets did not exceed 50% of the average value of our gross assets in 2011. Nonetheless, there is a risk that we were a PFIC in 2011 or we will be a PFIC in 2012 or subsequent years because there are no definitive rules regarding the manner in which a company should value its assets for purposes of the PFIC asset test. For example, taking into account our existing cash balances, if the value of our stock were to decline materially, it is possible that we could become a PFIC in 2012 or a subsequent year. Additionally, due to the complexity of the PFIC provisions and the limited authority available to interpret such provisions, there can be no assurance that our determination regarding our PFIC status could not be successfully challenged by the IRS.

Available Elections. If we become a PFIC for any taxable year, U.S. holders should consider whether or not to elect to treat us as a "qualified electing fund" or to elect to "mark-to-market" their ordinary shares in order to mitigate the adverse tax consequences of PFIC status.

If a U.S. holder makes a qualified electing fund election (a "QEF election") for its ordinary shares that is effective from the first taxable year that the U.S. holder holds our ordinary shares and during which we are a PFIC, the electing U.S. holder will avoid the adverse consequences of our being classified as a PFIC but will instead be required to include in income a pro rata share of our net capital gain, if any, and other earnings and profits ("ordinary earnings") as long-term capital gains and ordinary income, respectively, on a current basis, in each case whether or not distributed, in the taxable year of the U.S. holder in which or with which our taxable year ends. A subsequent distribution of amounts that were previously included in the gross income of U.S. holders should not be taxable as a dividend to those U.S. holders who made a QEF Election. In the event we incur a net loss for a taxable year, such loss will not be available as a deduction to an electing U.S. holder, and may not be carried forward or back in computing our net capital gain or ordinary earnings in other taxable years. The tax basis of the shares of an electing U.S. holder generally will be increased by amounts that are included in income, and decreased by amounts distributed but not taxed as dividends, under the QEF rules described above. In order to make (or maintain) a QEF election, the U.S. holder must annually complete and file IRS Form 8621. In addition, we must make certain information regarding our net capital gains and ordinary earnings available to the U.S. holder and permit our books and records to be examined to verify such information. Therefore, we will monitor our PFIC status and make a disclosure to our shareholders if we determine that we have become a PFIC. If we are a PFIC for any year and you make a request to us in writing at the address on the cover of our latest Annual Report on Form 20-F, Attention Chief Financial Officer, for the information required to make a QEF election, we will promptly make the information available to you and comply with any other applicable requirements of the Code.

A QEF election, once made with respect to us, applies to the tax year for which it was made and to all subsequent tax years, unless the election is invalidated or the IRS consents to revocation of the election. If you make a QEF election and we cease to be classified as a PFIC in a subsequent tax year, the QEF election will remain in effect, although it will not be applicable during those tax years in which we are not classified as a PFIC. Therefore, if we – after ceasing to be classified as a PFIC – again are classified as a PFIC in a subsequent tax year, the QEF election will be effective and you will again be subject to the rules described above for U.S. holders making QEF elections in such tax year and any subsequent tax years in which we are classified as a PFIC. A QEF election also remains in effect even after you dispose of all of your direct and indirect interest in our ordinary shares. As a result, if you subsequently acquire any of our ordinary shares or an interest in any of our ordinary shares, you will again be subject to the rules described above for U.S. holders making a QEF election for each tax year in which we are classified as a PFIC.

Alternatively, if a U.S. holder elects to "mark-to-market" its ordinary shares, the U.S. holder will generally include in its income any excess of the fair market value of our ordinary shares at the close of each taxable year over the holder's adjusted basis in such ordinary shares. If a U.S. holder makes a valid mark-to-market election with respect to our ordinary shares for the first taxable year of the U.S. holder in which the U.S. holder holds (or is deemed to hold) our ordinary shares and for which we are determined to be a PFIC, such holder generally will not be subject to the PFIC rules described above in respect to its common shares. A U.S. holder generally will be allowed an ordinary deduction for the excess, if any, of the adjusted tax basis of the ordinary shares over the fair market value of the ordinary shares as of the close of the taxable year, or the amount of any net mark-to-market gains recognized for prior taxable years, whichever is less. A U.S. holder's adjusted tax basis in the ordinary shares will generally be adjusted to reflect the amounts included or deducted under the mark-to-market election. Additionally, any gain on the actual sale or other disposition of the ordinary shares generally will be treated as ordinary income. Ordinary loss treatment also will apply to any loss recognized on the actual sale or other disposition of ordinary shares to the extent that the amount of such loss does not exceed the net mark-to-market gains previously included with respect to such ordinary shares. A mark-to-market election applies to the tax year for which the election is made and to each subsequent year, unless our ordinary shares cease to be marketable, as specifically defined, or the IRS consents to revocation of the election. No view is expressed regarding whether our ordinary shares are marketable for these purposes or whether the election will be available.

If a U.S. holder makes either the QEF election or the mark-to-market election, distributions and gain will not be recognized ratably over the U.S. holder's holding period or be subject to an interest charge as described above. Further, the denial of basis step-up at death described above will not apply. If a U.S. holder elects to treat us as a "qualified electing fund," gain on the sale of the ordinary shares will be characterized as capital gain. However, U.S. holders making one of these two elections may experience current income recognition, even if we do not distribute any cash. The elections must be made with the U.S. holder's federal income tax return for the year of election, filed by the due date of the return (as it may be extended) or, under certain circumstances provided in applicable Treasury Regulations, subsequent to that date.

The foregoing discussion relating to the QEF election and mark-to-market elections assumes that a U.S. holder makes the applicable election with respect to the first year in which Nova qualifies as a PFIC. If the election is not made for the first year in which Nova qualifies as a PFIC, the procedures for making the election and the consequences of election will be different.

A NUMBER OF SPECIFIC RULES AND REQUIREMENTS APPLY TO BOTH THE QEF ELECTION AND THE MARK-TO-MARKET ELECTION, AND YOU ARE URGED TO CONSULT YOUR TAX ADVISOR CONCERNING OUR PFIC STATUS AND THE VARIOUS ELECTIONS YOU CAN MAKE.

New Legislation regarding Medicare Tax

For taxable years beginning after December 31, 2012, a U.S. holder that is an individual or estate, or a trust that does not fall into a special class of trusts that is exempt from such tax, will be subject to a 3.8% tax on the lesser of (1) the U.S. holder's "net investment income" for the relevant taxable year and (2) the excess of the U.S. Investor's modified adjusted gross income for the taxable year over a certain threshold (which, in the case of individuals, will be between $125,000 and $250,000 depending on the individual's circumstances). A U.S. holder's "net investment income" may generally include its dividend income and its net gains from the disposition of shares, unless such dividends or net gains are derived in the ordinary course of the conduct of a trade or business (other than a trade or business that consists of certain passive or trading activities). If you are a U.S. holder that is an individual, estate or trust, you are urged to consult your tax advisors regarding the applicability of the Medicare tax to your income and gains in respect of your investment in the shares.

Withholdable Payments to Foreign Financial Entities and Other Foreign Entities

A non-U.S. holder may be subject to a U.S. federal withholding tax at a rate of 30% on certain payments made beginning January 1, 2014 to certain non-U.S. entities if certain disclosure requirements related to U.S. accounts maintained by, or the U.S. ownership of, the non-U.S. holder are not satisfied. Such payments would include U.S.-source dividends and the gross proceeds from the sale or other disposition of our common stock that can produce U.S.-source dividends. Non-U.S. holders should consult their own tax advisors regarding the effect, if any, of such withholding taxes on their ownership and disposition of our common stock.

United States Information Reporting and Backup Withholding

In general, U.S. holders may be subject to certain information reporting requirements under the Code relating to their purchase and/or ownership of stock of a foreign corporation such as the Company. Failure to comply with these information reporting requirements may result in substantial penalties.

For example, recently enacted legislation generally requires certain individuals who are U.S. holders to file Form 8938 to report the ownership of specified foreign financial assets for tax years beginning after March 18, 2010 if the total value of those assets exceeds an applicable threshold amount (subject to certain exceptions). For these purposes, a specified foreign financial asset includes not only a financial account (as defined by the Code and applicable Treasury Regulations for these purposes) maintained by a foreign financial institution, but also any stock or security issued by a non-U.S. person, any financial instrument or contract held for investment that has an issuer or counterparty other than a U.S. person and any interest in a foreign entity, provided that the asset is not held in an account maintained by a financial institution. The minimum applicable threshold amount is generally $50,000 in the aggregate, but this threshold amount varies depending on whether the individual lives in the U.S., is married, files a joint income tax return with his or her spouse, etc. Certain domestic entities that are U.S. holders may also be required to file Form 8938 in the near future. U.S. holders are urged to consult with their tax advisors regarding their reporting obligations, including the requirement to file IRS Form 8938.

Dividend payments and proceeds from the sale or disposal of ordinary shares may be subject to information reporting to the IRS and possible U.S. federal backup withholding at the rate of 28% (increasing to 31% for payments made after December 31, 2012). Certain holders (including, among others, corporations) are generally not subject to information reporting and backup withholding. A U.S. holder generally will be subject to backup withholding if such holder is not otherwise exempt and such holder:

- fails to furnish its taxpayer identification number, or TIN, which, for an individual, is ordinarily his or her social security number,
- furnishes an incorrect TIN,
- is notified by the IRS that it is subject to backup withholding because it has previously failed to properly report payments of interest or dividends, or
- fails to certify, under penalties of perjury, that it has furnished a correct TIN and that the IRS has not notified the U.S. holder that it is subject to backup withholding.

Any U.S. holder who is required to establish exempt status generally must file IRS Form W-9 ("Request for Taxpayer Identification Number and Certification").

Amounts withheld as backup withholding may be credited against a U.S. holder's federal income tax liability. A U.S. holder may obtain a refund of any excess amounts withheld under the backup withholding rules by filing the appropriate claim for refund with the IRS and furnishing any required information.

10.F Dividends and Paying Agents

Not applicable.

10.G Statements by Experts

Not applicable.

10.H Documents on Display

The documents referred to herein, including the Amended Articles, can be obtained from the Company at its registered office at Weizmann Science Park, Building 22, 2nd Floor, Ness-Ziona 76100, Israel. In addition, the Company is subject to certain informational requirements of the Securities Exchange Act of 1934 and the rules and regulations promulgated thereunder. In accordance therewith, the Company files reports with the Commission. Reports and other information provided to the Commission by the Company may be inspected and copied at the public reference facilities maintained by the Commission at Room 1024, 100 Fifth Street, N.E., Washington, D.C. 20549. Information on the operation of the public reference facilities may be obtained by calling the Commission at 1-800-SEC-0330. In addition, certain of the Company's reports filed with the Commission are available on-line at www.sec.gov.

10.I Subsidiary Information

Not applicable.

Item 11. Quantitative and Qualitative Disclosures About Market Risk

Market Risk

Market risk represents the risk of loss that may impact the consolidated financial position, results of operations or cash flows of the Company. The Company is exposed to market risk in the area of foreign exchange rates, as described below.

The Company does not utilize financial instruments for trading purposes and holds no derivative financial instruments that could expose it to significant market risk.

Impact of Currency Fluctuation

Substantially all of our sales are made in U.S. dollars. Over 50% of our expenses in 2011 were in dollars or in NIS linked to the dollar. The remaining expenses were in currencies other than the U.S. dollar, and mainly NIS. The dollar cost of our operations in countries other than the U.S., is negatively influenced by any devaluation of the U.S. dollar against other currencies. During 2011, the value of the U.S. dollar revaluated against the NIS by 7.6%, and devaluated against the Yen by approximately 4.9%. The value of the U.S. dollar devaluated against the Euro by approximately 3.3%. During the first six months of 2011 the value of the U.S. dollar devaluated against the NIS by approximately 3.8%, devaluated against the Yen by approximately 0.6% and revaluated against the Euro by 8.3%. During the last six months of 2011 the value of the U.S. dollar revaluated against the NIS by approximately 11.9%, against the Yen by approximately 4.4% and against the Euro by approximately 10.7%. During the first 2 months of 2012, the U.S. dollar devaluated by 1.4% against the NIS, revaluated by 3.1% against the Euro and by 5.3% against the Yen.

As of December 31, 2011, the majority of our net monetary assets were denominated in dollars and the remainder was denominated mainly in NIS. Net monetary assets that are not denominated in dollars or dollar-linked NIS were affected by the currency fluctuations in 2011 and are expected to continue to be affected by such currency fluctuations in 2012.

In 2008, the Company entered into currency-forward transactions and currency-put options (NIS/dollar, Euro/dollar, Yen/dollar) of approximately $33.6 million with settlement date through 2008 designed to reduce cash-flow exposure to the impact of exchange-rate fluctuations on firm commitments of approximately $33.6 million. In accordance with ASC 815-10 the Company recorded in 2008 a decrease of approximately $0.4 million in fair market value in “Other Comprehensive Income”.

In 2009, the Company entered into currency-forward transactions and currency-put options (NIS/dollar, Euro/dollar, Yen/dollar) of approximately $12.5 million with settlement dates through 2009, designed to reduce cash-flow exposure to the impact of exchange-rate fluctuations on firm commitments of approximately $12.5 million. In accordance with ASC 815-10 the Company recorded in 2009 an increase of approximately $0.2 million in fair market value in “Other Comprehensive Income”

In 2010, the Company entered into currency-forward transactions and currency-put options (NIS/dollar, Euro/dollar, Yen/dollar) of approximately $21.7 million with settlement dates through 2010, designed to reduce cash-flow exposure to the impact of exchange-rate fluctuations on firm commitments of approximately $21.7 million. In accordance with ASC 815-10 the Company recorded in 2010 an increase of approximately $0.3 million in fair market value in “Other Comprehensive Income”.

In 2011, the Company entered into currency-forward transactions and currency-put options (NIS/dollar, Euro/dollar, Yen/dollar) of approximately $42.5 million with settlement dates through 2011-2012, designed to reduce cash-flow exposure to the impact of exchange-rate fluctuations on firm commitments of approximately $42.5 million. In accordance with ASC 815-10 the Company recorded in 2011 an increase of approximately $0.7 million in fair market value in “Other Comprehensive Income”.

Short-term exposures to changing foreign exchange rates are primarily due to operating cash flows denominated in foreign currencies and transactions denominated in non-functional currencies. Our most significant foreign currency exposures are related to our operations in Israel. We have used foreign exchange forward contracts to partially cover known and anticipated exposures. We estimate that an instantaneous 10% depreciation in NIS from its level against the dollar as of December 31, 2011, with all other variables held constant, would decrease the fair value of our net assets denominated in foreign currency, held at December 31, 2011, by approximately $0.3 million.

Item 12. Description of Securities Other than Equity Securities

Not applicable.

PART II

Item 13. Defaults, Dividend Arrearages and Delinquencies

None.

Item 14. Material Modification to the Rights of Security Holders and Use of Proceeds

The effective date of the Securities Act registration statement for which use of proceeds is being disclosed is April 11, 2000. The commission file number assigned to that registration statement is 333-11640.

We sold 3,000,000 ordinary shares for net proceeds of $49.0 million.

Item 15. Controls and Procedures

(a) Our management, including our chief executive officer and chief financial officer, has evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2011. Based on such review, our chief executive officer and chief financial officer have concluded that we have in place effective controls and procedures designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Securities Exchange Act of 1934, as amended, is accumulated and communicated to our management, including our principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure, and is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms.

(b) Our management, under the supervision of our chief executive officer and chief financial officer, is responsible for establishing and maintaining adequate internal control over our financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) of the Securities Exchange Act of 1934, as amended. The Company's internal control over financial reporting is defined as 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. Internal control over financial reporting includes policies and procedures that:

— pertain to the maintenance of records that in reasonable detail accurately and fairly reflect our transactions and asset dispositions;

— provide reasonable assurance that transactions are recorded as necessary to permit the preparation of our 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 the prevention or timely detection of unauthorized acquisition, use or disposition of assets that could have a material effect on our financial statements.

Due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. In addition, 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.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we evaluated the effectiveness of our internal control over financial reporting as of December 31, 2011 based on the framework for Internal Control-Integrated Framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, our management concluded that the Company's internal controls over financial reporting were effective as of December 31, 2011.

(c) Brightman Almagor Zohar & Co., an independent registered accounting firm and a member firm of Deloitte Touche Tohmatsu, has issued an attestation report on the effectiveness of our internal control over financial reporting, as stated in their report included herein. See "Report of Independent Registered Public Accounting Firm" on page F-3.

(d) There were no changes in our internal controls over financial reporting identified with the evaluation thereof that occurred during the period covered by this annual report that have materially affected, or are reasonable likely to materially affect our internal control over financial reporting.

Item 16A. Audit Committee Financial Expert

Our board of directors has determined that our audit committee includes one audit committee financial expert, as defined by Item 16A of Form 20-F, Mr. Dan Falk. Mr. Dan Falk is an independent director as such term is defined by Rule 5605(a)(2) of The NASDAQ Stock Market.

Item 16B. Code of Ethics

The Company has adopted a written code of conduct that applies to all Company employees, including the Company's directors, principal executive officer, principal financial officer and principal accounting officer.

You may review our code of conduct on our website, http://www.nova.co.il under "Corporate/Corporate Governance".

Item 16C. Principal Accountant Fees and Services

During each of the last two fiscal years, Brightman Almagor Zohar & Co., an independent registered accounting firm and a member firm of Deloitte Touche Tohmatsu ("Brightman Almagor Zohar & Co.") has acted as the our registered public accounting firm and independent auditors.

Audit Fees

Brightman Almagor Zohar & Co. billed the Company approximately $94,000 for audit services for each of the fiscal years 2010 and 2011, respectively, including fees associated with the annual audit and reviews of the Company's quarterly consolidated financial results submitted on Form 6-K, consultations on various accounting issues and performance of local statutory audits. The audit fees in 2011 include fees associated with the audit of management assessment of internal control over financial reporting.

Audit-Related Fees

Brightman Almagor Zohar & Co. did not bill for any audit-related services in 2011 or 2010, except as included under the caption "Audit Fees".

Tax Fees

Brightman Almagor Zohar & Co. did not bill the Company for any tax advice services for fiscal year 2011 or 2010.

All Other Fees

Other than Audit Fees and Tax Fees described above, Brightman Almagor Zohar & Co. billed the Company approximately $18,000 for SEC compliance related services and services related to the Office of Chief Scientist and Investment Center, for each of the fiscal years 2010 and 2011.

Pre-Approval Policies for Non-Audit Services

Prior to the engagement of Brightman Almagor Zohar & Co. each year, the engagement is approved by the audit committee of the board of directors. The Company's audit committee rules of procedure provide for a process with respect to the prior approval of all services, including non-audit services, to be performed by the independent auditors for the Company. In fiscal 2011 and 2010, the Company's audit committee approved all of the services provided by Brightman Almagor Zohar & Co.

Item 16D. Exemptions from the Listing Standards for Audit Committees

The Company has not obtained any exemption from applicable audit committee listing standards.

Item 16E. Purchases of Equity Securities by the Issuer and Affiliates Purchasers

In 2011, neither the Company nor any affiliated purchaser (as defined in the Exchange Act) purchased any of the Company's ordinary shares.

Item 16F. Changes in Registrant's Certifying Accountant

None.

Item 16G. Corporate Governance

There are no significant ways in which the Company's corporate governance practices differ from those followed by domestic companies listed on The NASDAQ Global Market.

PART III

Item 17. Financial Statements

Not applicable.

Item 18. Financial Statements

See pages F-1 through F-26.

Item 19. Exhibits

See Exhibit Index.

NOVA MEASURING INSTRUMENTS LTD.

CONSOLIDATED FINANCIAL STATEMENTS
AS OF DECEMBER 31, 2011

NOVA MEASURING INSTRUMENTS LTD.

CONSOLIDATED FINANCIAL STATEMENTS
AS OF DECEMBER 31, 2011

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders of
Nova Measuring Instruments LTD.

We have audited the accompanying consolidated balance sheets of Nova Measuring Instruments Ltd. ("the Company") and its subsidiaries as of December 31, 2011 and 2010 and the related statements of operations, changes in shareholders' equity and comprehensive income, and cash flows for each of the three years in the period ended December 31, 2011. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company and its subsidiaries as of December 31, 2011 and 2010 and the consolidated results of their operations and their consolidated cash flows for each of the three years in the period ended December 31, 2011, in conformity with accounting principles, generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company’s internal control over financial reporting as of December 31, 2011, based on the criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 28, 2012, expressed an unqualified opinion on the Company’s internal control over financial reporting.

/s/ Brightman Almagor zohar & Co.
Certified Public Accountants
A member firm of Deloitte Touche Tohmatsu
Tel Aviv, Israel
March 28, 2012

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders of Nova Measuring Instruments LTD.

We have audited the internal control over financial reporting of Nova Measuring Instruments LTD. and subsidiaries (the "Company") as of December 31, 2011, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. 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 conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel 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 the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on the criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended December 31, 2011 of the company and our report dated March 28, 2012 expressed an unqualified opinion on those financial statements.

/s/ Brightman Almagor zohar & Co.

Certified Public Accountants
A member firm of Deloitte Touche Tohmatsu
Tel Aviv, Israel
March 28, 2012

NOVA MEASURING INSTRUMENTS LTD.
CONSOLIDATED BALANCE SHEETS
(In thousands, except share data)

	As of December 31,	
	2011	2010
CURRENT ASSETS		
Cash and cash equivalents	$ 18,716	$ 25,394
Short-term interest-bearing bank deposits	66,247	35,562
Held to maturity securities	1,582	--
Trade accounts receivable, net of allowance for doubtful accounts of $2 and $122, respectively	13,402	13,162
Inventories (Note 3)	9,608	10,849
Deferred income tax assets (Note 9)	2,500	--
Other current assets	1,173	1,736
TOTAL CURRENT ASSETS	113,228	86,703
LONG-TERM ASSETS		
Long-term interest-bearing bank deposits	545	631
Other long-term assets	291	163
Severance pay funds (Note 6)	2,885	2,786
	3,721	3,580
FIXED ASSETS, NET (Note 4)	5,998	3,094
TOTAL ASSETS	$ 122,947	$ 93,377
CURRENT LIABILITIES		
Trade accounts payable	$ 8,305	$ 9,956
Deferred revenues	2,172	3,397
Other current liabilities (Note 5)	8,082	7,908
TOTAL CURRENT LIABILITIES	18,559	21,261
LONG-TERM LIABILITIES		
Liability for employee severance pay (Note 6)	3,851	3,709
Deferred revenue	611	--
Other long-term liability	20	23
TOTAL LONG TERM LIABILITIES	4,482	3,732
COMMITMENTS AND CONTINGENCIES (Note 7)	--	--
TOTAL LIABILITIES	23,041	24,993
SHAREHOLDERS' EQUITY (Note 8)		
Ordinary shares, NIS 0.01 par value - authorized 40,000,000		

shares, 26,467,542 shares issued and outstanding at December 31, 2011 and 25,374,844 shares issued and outstanding at December 31, 2010		72		71
Additional paid-in capital		108,804		104,661
Accumulated other comprehensive income		(402)		338
Accumulated deficit		(8,568)		(36,686)
Total shareholders' equity		99,906		68,384
Total liabilities and shareholders' equity	$	122,947	$	93,377

The accompanying notes are an integral part of the consolidated financial statements.

NOVA MEASURING INSTRUMENTS LTD.
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share data)

	Year ended December 31, 2011	2010	2009
REVENUES:			
Products	$85,562	$71,790	$29,639
Services	17,266	14,830	9,679
	102,828	86,620	39,318
COST OF REVENUES:			
Products	33,789	29,056	12,732
Services	11,043	10,148	8,999
	44,832	39,204	21,731
GROSS PROFIT	57,996	47,416	17,587
OPERATING EXPENSES:			
Research and development, net of participation by the Office of the Chief Scientist of $2,155 , $2,212 and $2,209, respectively (Note 7a)	18,677	12,445	6,865
Sales and marketing	11,373	10,133	6,014
General and administrative	3,229	2,968	2,240
	33,279	25,546	15,119
OPERATING INCOME	24,717	21,870	2,468
INTEREST INCOME, NET	901	305	163
INCOME BEFORE INCOME TAXES	25,618	22,175	2,631
BENEFIT FROM DEFERRED INCOME TAXES	2,500	--	--
NET INCOME FOR THE YEAR	$28,118	$22,175	$2,631
NET INCOME PER SHARE:			
Net income per share:			
Basic	$1.07	$0.91	$0.14
Diluted	$1.04	$0.86	$0.13
Shares used in calculation of net income per share:			
Basic	26,232	24,448	19,473
Diluted	26,931	25,692	20,089

The accompanying notes are an integral part of the consolidated financial statements.

NOVA MEASURING INSTRUMENTS LTD.
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY AND COMPREHENSIVE INCOME
(In thousands)

	Ordinary Shares Number	Ordinary Shares Amount	Additional Paid-in Capital	Accumulated other Comprehensive Income (loss)	Accumulated Deficit	Total Comprehensive Income (loss)	Total Shareholders' Equity (loss)
Balance as of January 1, 2009	19,378	$55	$83,969	$ (191)	$ (61,492)		$ 22,341
Employee share-based plans	599	1	1,252				$ 1,253
Amortization of deferred stock based compensation			454				454
Change in fair market value of hedging derivatives				236		$ 236	236
Net income for the year					2,631	2,631	2,631
Total comprehensive income						$ 2,867	2,867
Balance as of December 31, 2009	19,977	$56	$85,675	$ 45	$ (58,861)		$ 26,915
Shares issued in public offering	4,428	12	16,956				16,968
Exercise of warrants	336	1					1
Employee share-based plans	557	2	1,320				1,322
Shares issued under employee share-based plans	77	(*)					-
Amortization of deferred stock based compensation			710				710
Increase in fair market value of derivatives				293		$ 293	293
Net income for the year					22,175	22,175	22,175

Total comprehensive income						$ 22,468	$ 22,468
Balance as of December 31, 2010	25,375	$71	$104,661	$ 338	$ (36,686)		$ 68,384
Exercise of warrants	581	1	1,772				1,773
Employee share-based plans	436	(*)	936				936
Shares issued under employee share-based plans	76	(*)					-
Amortization of deferred stock based compensation			1,435				1,435
Increase in fair arket value of derivatives				(740)		$ (740)	(740)
Net income for the year					28,118	28,118	28,118
Total comprehensive income						$ 27,378	$ 27,378
Balance as of December 31, 2011	26,468	$72	$108,804	$ (402)	$ (8,568)		$ 99,906

(*) Less than $1

The accompanying notes are an integral part of the consolidated financial statements.

NOVA MEASURING INSTRUMENTS LTD.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year ended December 31,		
	2011	2010	2009
CASH FLOWS – OPERATING ACTIVITIES			
Net income for the year	$28,118	$22,175	$2,631
Adjustments to reconcile net income to net cash from (used in) operations:			
Depreciation and amortization	1,700	1,260	1,254
Amortization of deferred stock-based compensation	1,435	710	454
Deferred income taxes	(2,500)	-	-
Increase (decrease) in liability for employee termination benefits, net	43	108	(159)
Increase in trade accounts receivables	(240)	(1,617)	(8,762)
Decrease (increase) in inventories	(1,056)	(7,526)	2,695
Decrease (increase) in other current and long term assets	(305)	197	(421)
Increase (decrease) in trade accounts payables and other long term liabilities	(1,639)	6,242	234
Increase in other current liabilities	159	2,740	1,169
Increase (decrease) in short and long term deferred income	(614)	1,543	(882)
Net cash provided by (used in) operating activities	25,101	25,832	(1,787)
CASH FLOWS – INVESTING ACTIVITIES			
Increase in short-term interest-bearing bank deposits	(30,685)	(26,955)	(8,510)
Investments in short-term held to maturity securities	(1,582)	-	-
Decrease (increase) in long-term interest-bearing bank deposits	86	(70)	(17)
Purchase of fixed assets	(2,307)	(1,565)	(403)
Net cash used in investing activities	(34,488)	(28,590)	(8,930)
CASH FLOWS – FINANCING ACTIVITIES			
Shares issued in a public offering	-	16,968	-
Shares issued under employee share-based plans	2,709	1,323	1,253
Net cash provided by financing activities	2,709	18,291	1,253
Increase (decrease) in cash and cash equivalents	(6,678)	15,533	(9,464)
Cash and cash equivalents – beginning of year	25,394	9,861	19,325
Cash and cash equivalents – end of year	$18,716	$25,394	$9,861

The accompanying notes are an integral part of the consolidated financial statements.

NOVA MEASURING INSTRUMENTS LTD.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

SCHEDULE A - NON CASH ACTIVITIES

	Year ended December 31,		
	2011	2010	2009
Transfer of assets from inventory to fixed assets	$2,297	$626	$218

The accompanying notes are an integral part of the consolidated financial statements

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 1 - GENERAL

A. Business Description

Nova Measuring Instruments Ltd. (the “Company”) was incorporated in May 1993 and commenced operations in October 1993 in the design, development and production of integrated process control systems, used in the manufacturing of semiconductors. In October 1995, the Company began manufacturing and marketing its systems. In recent years, the Company expanded its product offering to include stand alone systems.

The Company continues research and development for the next generation of its products and additional applications for such products. The Company operates in one operating segment.

The Company has wholly owned subsidiaries in the United States of America (the “U.S.”), Japan, The Netherlands, Taiwan and Korea. The subsidiaries (the “subsidiaries”) are engaged in pre-sale activities and providing technical support to customers.

The ordinary shares of the Company are traded on The NASDAQ Global Market since April, 2000 and on the Tel-Aviv Stock Exchange since June, 2002.

B. Use of Estimates in the Preparation of Financial Statements

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

C. Financial Statements in U.S. Dollars

The currency of the primary economic environment in which the operations of the Company and its subsidiaries are conducted is the U.S. dollar (the “dollar”). Accordingly, the Company uses the dollar as its functional and reporting currency. Certain of the dollar amounts in the financial statements may represent the dollar equivalent of other currencies, including the New Israeli Shekel (“NIS”).

Transactions and balances denominated in dollars are presented at their dollar amounts. Non-dollar transactions and balances are remeasured into dollars in accordance with the principles set forth in Accounting Standards Codification Topic No. 830 (“ASC 830”), “Foreign Currency Translation”. Net financing income includes translation gains (losses), which were immaterial for all years presented.

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 2 - SIGNIFICANT ACCOUNTING POLICIES

A. Principles of Consolidation and Basis of Presentation

The Company's consolidated financial statements include the financial statements of the Company and its wholly owned subsidiaries ("the Group"), after elimination of material intercompany transactions and balances.

The Company's consolidated financial statements have been prepared in accordance with generally accepted accounting principles ("GAAP") in the United States of America.

The following is a summary of the significant accounting policies, which were applied in the preparation of these financial statements, on a consistent basis:

B. Cash and Cash Equivalents

Cash and cash equivalents are comprised of cash and demand deposits in banks and other short-term, highly liquid investments (primarily interest-bearing deposits) with maturity dates not exceeding three months from the date of deposit.

C. Allowance for Doubtful Accounts

The allowance for doubtful accounts is computed on the specific identification basis.

D. Short-Term Held to Maturity Investments

Securities held to maturity include investments in debt securities that the Company has positive intent and ability to hold to maturity. Securities held to maturity are measured at amortized cost.

Short-term held to maturity investments include investments in debt securities with maturities of more than three months but less than one year.

E. Inventories

Inventories are presented at the lower of cost or market. Cost is determined as follows:

Raw materials-on the average cost basis.

Finished goods and work in process - on actual production cost basis (materials, labor and indirect manufacturing costs).

The Company writes down product inventory, based on assumptions about future demand and market conditions.

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 2 - SIGNIFICANT ACCOUNTING POLICIES (CONT.)

F. Fixed assets

Fixed assets are presented at cost, net of accumulated depreciation. Annual depreciation is calculated based on the straight-line method over the shorter of the estimated useful lives of the related assets. Estimated useful life, in years, is as follows:

	Years
Electronic equipment	3-7
Office furniture and equipment	7-15

Leasehold improvements are amortized using the straight-line method, over the useful lives of the improvements.

G. Accrued Warranty Costs

Accrued warranty costs are calculated in respect of the warranty period on the Company’s products (generally one year) and are based on the Company’s prior experience and in accordance with management’s estimate. See Note 5B for disclosure with regard to accrued warranty costs.

H. Revenue Recognition

On January 1, 2011, the Company adopted the Financial Accounting Standards Board ASU No. 2009-13, ”Revenue Recognition (Topic 605) Multiple-Deliverable Revenue Arrangements” and ASU No. 2009-14, “Certain Revenue Arrangements That Include Software Elements” on a prospective basis for applicable transactions originating after January 1, 2011.

Revenues from the sale of products are recognized when all the following criteria have been met: a persuasive evidence of an arrangement exists, delivery has occurred, the price is fixed or determinable, collection of resulting receivables is probable and there are no remaining significant obligations.

ASU No. 2009-13, requires allocation of arrangement consideration among the separate units of accounting based on their relative selling prices. The selling price for each unit of accounting is determined based on a selling price hierarchy using either vendor specific objective evidence (“VSOE”) of selling price, third party evidence of selling price (“TPE”) or the vendor’s best estimate of estimated selling price (“ESP”) for that deliverable. Use of the residual method is prohibited. The objective of ESP is to determine the price at which the Company would transact a sale if the product or service were sold on a stand-alone basis. The adoption of this standard did not have a material impact on the Company’s Consolidated Statements of Operations.

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 2 - SIGNIFICANT ACCOUNTING POLICIES (CONT.)

H. Revenue Recognition (cont.)

ASU No. 2009-14, modified the scope of the software revenue recognition guidance to exclude (a) non-software components of tangible products and (b) software components of tangible products that are sold, licensed, or leased with tangible products when the software components and non-software components of the tangible product function together to deliver the tangible product's functionality.

The adoption of this standard did not have a material impact on the Company's Consolidated Statements of Operations.

Revenues from Service contracts generally specify fixed payment amounts for periods longer than one month, and are recognized on a straight line basis over the term of the contract.

I. Research and Development

Research and development costs are charged to operations as incurred. Amounts received or receivable from the Government of Israel through the Office of the Chief Scientist ("OCS") as participation in certain research and development programs are offset against research and development costs. The accrual for grants receivable is determined based on the terms of the programs, provided that the criteria for entitlement are expected to be met. Royalty expenses are determined based on actual revenues and presented in Cost of Goods Sold.

J. Income Taxes

The Company accounts for income taxes utilizing the asset and liability method in accordance with ASC 740, "Income Taxes". Current tax liabilities are recognized for the estimated taxes payable on tax returns for the current year. Deferred tax liabilities or assets are recognized for the estimated future tax effects attributable to temporary differences between the income tax bases of assets and liabilities and their reported amounts in the financial statements, and for tax loss carryforwards. Measurement of current and deferred tax liabilities and assets is based on provisions of enacted tax laws, and deferred tax assets are reduced, if necessary, by the amount of tax benefits, the realization of which is not considered more likely than not based on available evidence.

ASC 740-10 requires a two-step approach to recognizing and measuring uncertain tax positions. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount which is more than 50% likely of being realized upon ultimate settlement.

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 2 - SIGNIFICANT ACCOUNTING POLICIES (Cont.)

K. Share-Based Compensation

The Company accounts for equity based compensation using ASC 718-10 “Share-Based Payment,” which requires companies to recognize the cost of employee services received in exchange for awards of equity instruments based upon the grant-date fair value of those awards.

Stock Options

Under ASC 718, the fair market value of each option grant is estimated on the date of grant using the “Black-Scholes option pricing” method with the following weighted-average assumptions:

	2011	2010	2009
Risk-free interest rate	1.35%	2.35%	2.88%
Expected life of options	4.75 years	6.25 years	6.25 years
Expected volatility	88.06%	81.77%	79.17%
Expected dividend yield	0%	0%	0

L. Earnings per Share

Earnings per share are presented in accordance with ASC 260-10, “Earnings per Share.” Pursuant to which, basic earnings (loss) per share excludes the dilutive effects of convertible securities and is computed by dividing income (loss) available to common shareholders by the weighted-average number of ordinary shares outstanding for the period. Diluted earnings (loss) per share reflect the potential dilutive effect of all convertible securities. The number of potentially dilutive securities excluded from diluted earnings per share due to the anti-dilutive effect amounted to 2,453,000 in 2009, 490,500 in 2010 and 449,237 in 2011.

M. Derivative Financial Instruments

ASC 815 requires the presentation of all derivatives as either assets or liabilities on the balance sheet and the measurement of those instruments at fair value.

For derivative instruments that are designated and qualify as a cash flow hedge (i.e., hedging the exposure to variability in expected future cash flows that is attributable to a particular risk), the effective portion of the gain or loss on the derivative instrument is reported as a component of other comprehensive income and reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. The remaining gain or loss on the derivative instrument in excess of the cumulative change in the present value of future cash flows of the hedged item, if any, is recognized in current earnings during the period of change. See Note 12 for disclosure of the derivative financial instruments in accordance with such pronouncements.

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 2 - SIGNIFICANT ACCOUNTING POLICIES (Cont.)

N. Impairment of long-lived assets

Long-lived assets, held and used by the Company are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets (or asset group) may not be recoverable. In the event that the sum of the expected future cash flows (undiscounted and without interest charges) of the long-lived assets (or asset group) is less than the carrying amount of such assets, an impairment charge would be recognized, and the assets (or asset group) would be written down to their estimated fair values.

O. New Accounting Pronouncements

In May 2011, the FASB issued Accounting Standards Update No. 2011-04, Fair Value Measurement (Topic 820): Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRSs ("ASU 2011-04"). ASU 2011-04 changes certain fair value measurement principles and clarifies the application of existing fair value measurement guidance. These amendments include, among other matters, (1) the application of the highest and best use and valuation premise concepts, (2) measuring the fair value of an instrument classified in a reporting entity's shareholders' equity and (3) disclosing quantitative information about the unobservable inputs used within the Level 3 hierarchy. The amendments are effective for interim and annual periods beginning after December 15, 2011 on a prospective basis. The Company does not expect ASU 2011-04 to have a material effect on its consolidated financial statements.

In June 2011, the FASB amended its guidance on the presentation of comprehensive income. The amendment eliminates the alternative of presenting items of other comprehensive income in the statement of changes in equity and requires an entity to present the components of net income and other comprehensive income in either a single continuous statement or in two separate, but consecutive, statements. Adoption of this guidance will be effective as of January 1, 2012. The amendment will impact the presentation of the financial statements but will not impact the Company's financial position, results of operations or cash flows.

NOTE 3 - INVENTORIES

A.

	As of December 31, 2011	As of December 31, 2010
Raw materials	$ 589	$ 1,425
Work in process	5,195	3,931
Finished goods	3,824	5,493
	$ 9,608	$ 10,849

Including write-off of $1,019 and $265 for 2011 and 2010 respectively, presented in the cost of goods sold.

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 4 - FIXED ASSETS, NET

	As of December 31, 2011	As of December 31, 2010
Cost:		
Electronic equipment	$ 13,283	$ 9,891
Office furniture and equipment	856	677
Leasehold improvements	3,217	2,444
	17,356	13,012
Accumulated depreciation and amortization:		
Electronic equipment	8,719	7,443
Office furniture and equipment	648	632
Leasehold improvements	1,991	1,843
	11,358	9,918
Net book value	$ 5,998	$ 3,094

NOTE 5 - OTHER CURRENT LIABILITIES

A. Consists of:

	As of December 31, 2011	As of December 31, 2010
Accrued salaries and fringe benefits	$ 3,869	$ 3,936
Accrued warranty costs (See B below)	2,044	2,347
Governmental institutions	1,066	890
Investment in financial instruments	402	-
Other	701	735
	$ 8,082	$ 7,908

B. Accrued warranty costs:

The Company provides standard warranty coverage on its systems. Parts and labor are covered under the terms of the warranty agreement. The Company accounts for the estimated warranty cost as a charge to costs of revenues when revenue is recognized.

The following table provides the changes in the product warranty accrual for the fiscal years ended December 31, 2011 and 2010:

	As of December 31, 2011	As of December 31, 2010
Balance as of beginning of year	$ 2,347	$ 963
Services provided under warranty	(2,518)	(1,869)
Changes in provision	2,215	3,253

Balance as of end of year	$ 2,044	$ 2,347

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 6 - LIABILITY FOR EMPLOYEE SEVERANCE PAY, NET

Israeli law and labor agreements determine the obligations of the Company to make severance payments to dismissed employees and to employees leaving employment under certain other circumstances. The obligation for severance pay benefits, as determined by Israeli law, is based upon length of service and the employee's most recent salary. The liability is partially covered through insurance policies purchased by the Company and deposits in a severance fund. Severance-pay expenses amounted to $42, $844 and $692 for year 2011, 2010 and 2009, respectively.

NOTE 7 - COMMITMENTS AND CONTINGENCIES

A. The Company has received grants in the aggregate amount of $20,829 from the OCS, as participation of up to 60% of certain development costs. In consideration for such grants, the Company has undertaken to pay royalties amounting to 3%-3.5% of the net sales of products developed, directly or indirectly, from the projects financed, not to exceed 100% of the grants received. Refund of the grants thereon is contingent on future sales and the Company has no obligation to refund grants if sufficient sales are not generated. Royalty expense amounted to $265 and $130 for the years 2011 and 2010, respectively. The balance of the contingent liability to the OCS as of December 31, 2011 was approximately $17,517 (December 31, 2010: $14,586).

B. The Group rents its facilities under various operating lease agreements, which expire on various dates, the latest of which is in 2015. The minimum rental payments are as follows:

Year		
2012	$	1,083
2013	$	150
2014	$	74

Rental expense for the facilities amounted to $1,283, $1,125 and $1,096 for 2011, 2010 and 2009, respectively.

NOTE 8 - SHAREHOLDERS' EQUITY

A. Rights of Shares

Holders of ordinary shares are entitled to participate equally in the payment of cash dividends and bonus shares (stock dividends) and, in the event of the liquidation of the Company, in the distribution of assets after satisfaction of liabilities to creditors. Each ordinary share is entitled to one vote on all matters to be voted on by shareholders.

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 8 - SHAREHOLDERS' EQUITY (Cont.)

B. Secondary Public Offering

On February 9, 2010, the Company issued 4,427,500 ordinary shares in an underwritten public offering for a net consideration of $16,968.

C. Share Purchase Agreement

On February 28, 2007, the Company entered into Share Purchase Agreement with four investors for the private placement of 1,937,983 ordinary shares of the Company, at a price of $2.58 per share, for gross proceeds of $5,000. As part of the transaction, the Company issued warrants to the investors for the purchase of 1,453,485 additional ordinary shares at an exercise price of $3.05 per share. On March 13, 2007, the shares were issued and the proceeds from the private placement were received. 872,092 warrants were exercised and converted into 336,134 shares by one investor in March, 2010. 581,393 warrants were exercised and converted into 581,393 shares by another investor during January 2011.

D. Employee Incentive Plans

The Company's Board of directors approves, from time to time, employee incentive plans, the last of which was approved in October 2007. Employee incentive plans include stock options, restricted stock units and restricted stock awards.

Stock Options

The following table summarizes the effects of stock-based compensation resulting from the application of ASC 718 included in the Statements of Operations as follows:

	Year ended December 31,		
	2011	2010	2009
Cost of Revenues:			
Products	$ 202	$ 97	$ 82
Services	91	35	35
Research and Development expenses	601	313	211
Sales and Marketing expenses	470	141	89
General and Administration expenses	71	124	37
Total	$ 1,435	$ 710	$ 454

Stock options usually vest over four years and their term may not exceed 10 years. The exercise price of each option is usually the market price of the underlying share at the date of each grant.

Through December 31, 2011, 9,506,057 share options have been issued under the plans, of which 3,698,125 options have been exercised, 4,227,998 options have been cancelled, and 634,252 options were exercisable as of December 31, 2011.

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 8 - SHAREHOLDERS' EQUITY (Cont.)

D. Employee Incentive Plans (Cont.)

The weighted average fair value (in dollars) of the options granted during 2011, 2010 and 2009, according to Black-Scholes option-pricing model, amounted to $5.94, $4.06 and $0.72 per option, respectively. Fair value was determined on the basis of the price of the Company's share.

Summary of the status of the Company's share option plans as of December 31, 2011, 2010 and 2009, as well as changes during each of the years then ended, is presented below:

	2011		2010		2009	
	Share options	Weighted average exercise price	Share options	Weighted average exercise price	Share options	Weighted average exercise price
Outstanding - beginning of year	1,631,072	2.96	1,827,862	1.99	2,122,534	2.42
Granted	444,237	8.81	490,500	5.66	626,600	1.01
Exercised	436,601	2.12	557,407	2.45	598,585	2.10
Cancelled	62,894	4.05	129,883	1.73	322,687	2.53
Outstanding - year end	1,575,814	4.84	1,631,072	2.96	1,827,862	1.99
Options exercisable at year-end	634,252	2.95	697,336	2.23	852,559	2.77

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 8 - SHAREHOLDERS' EQUITY (Cont.)

D. Employee Incentive Plans (Cont.)

The following table summarizes information about share options outstanding as of December 31, 2011:

	Outstanding as of December 31, 2011			Exercisable as of December 31, 2011	
Range of exercise prices (US dollars)	Number outstanding	Weighted average remaining contractual life (in years)	Weighted average exercise price (US dollars)	Number exercisable	Weighted average exercise price (US dollars)
0.43-1.95	446,704	6.2	1.19	240,060	1.26
2.06-2.87	231,965	2.5	2.86	231,839	2.86
4.01-4.78	171,250	8.4	4.36	65,001	4.36
5.48	5,000	5.6	5.48	1,672	5.48
6.08-6.70	306,725	8.4	6.40	93,180	6.36
7.37-7.40	10,000	8.9	7.40	2,500	7.40
8.4-10.83	404,170	6.5	8.97	-	-
	1,575,814	6.4	4.84	634,252	2.95

Unrecognized compensation expense

As of December 31, 2011, there was $2,209 of total unrecognized compensation cost related to non-vested employee options and $229 of total unrecognized compensation cost related to non-vested employee RSUs. These costs are generally expected to be recognized over a period of four years.

Restricted Share Units

Restricted Share Units ("RSU") grants are rights to receive shares of the Company's common stock on a one-for-one basis and vest 25% on each of the first, second, third and fourth anniversaries of the grant date and are not entitled to dividends or voting rights, if any, until they are vested. The fair value of the RSU awards is being recognized on a straight-line basis over vesting period. As of December 31, 2011, 331,451 RSU's, had been issued, 153,812 RSU's had been vested 1,350 had been cancelled. As of December 31, 2010, 308,530 RSU's, had been issued, 76,878 RSU's had been vested, none of which had been cancelled.

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 9 - INCOME TAXES

A. Law for the Encouragement of Capital Investments – 1959

Part of the Company's investment in equipment has received approvals in accordance with the Law for the Encouragement of Capital Investments, 1959 ("Approved Enterprise" status) in three separate investment plans. The Company has chosen to receive its benefits through the "Alternative Benefits" track, and, as such, is eligible for various benefits. These benefits include accelerated depreciation of fixed assets used in the investment program, as well as a full tax exemption on undistributed income in relation to income derived from the first plan for a period of 4 years and for the second and third plans for a period of 2 years. Thereafter a reduced tax rate of 25% will be applicable for an additional period of up to 3 years for the first plan and 5 years for the second and third plans, commencing with the date on which taxable income is first earned but not later than certain dates. The first and second plan benefit periods have already expired. The benefit period of the third plan have not yet commenced.

The period in which the Company is entitled to the abovementioned tax benefits is limited to seven years from the first year that taxable revenues are generated, and such benefits must be utilized within 12 years from the year that operation (as defined) of the approved enterprise commences, or 14 years from the year the approval is granted, whichever is earlier.

In the case of foreign investment of more than 25%, the tax benefits are extended to 10 years, and in the case of foreign investment ranging from 49% to 100% the tax rate is reduced on a sliding scale to 10%. The benefits are subject to the fulfillment of the conditions of the letter of approval.

On April 1, 2005, an amendment to the Investment Law came into effect ("the Amendment") and has significantly changed the provisions of the Investment Law. The Amendment limits the scope of enterprises which may be approved by the Investment Center by setting criteria for the approval of a facility as a Privileged Enterprise, such as provisions generally requiring that at least 25% of the Privileged Enterprise's Income will be derived from export. Additionally, the Amendment enacted major changes in the manner in which tax benefits are awarded under the Investment Law so that companies no longer require Investment Center approval in order to qualify for tax benefits. However, the Investment Law provides that terms and benefits included in any certificate of approval already granted will remain subject to the provisions of the law as they were on the date of such approval. Therefore, the Israeli companies with Approved Enterprise status will generally not be subject to the provisions of the Amendment.

As a result of the amendment, tax-exempt income generated under the provisions of the new law, will subject the Company to taxes upon distribution or liquidation.

In 2011, based on Company investments in property and equipment in the years 2009 and 2008, the Company submitted a request to approve a new plan (fourth plan) as a Privileged Enterprise in accordance with the Amendment to the Investment Law. The commencing year was 2010. The expected expiration year is 2021.

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 9 - INCOME TAXES (Cont.)

A. Law for the Encouragement of Capital Investments – 1959 (cont.)

The above tax benefits are conditioned upon fulfillment of the requirements stipulated by the aforementioned law and the regulations promulgated there under, as well as the criteria set forth in the certificates of approval. In the event of failure by the Company to comply with these conditions, the tax benefits could be canceled, in whole or in part, and the Company would be required to refund the amount of the canceled benefits, plus interest and certain inflation adjustments.

The income of the Company that is not derived from assets, which are eligible for reduced taxation benefits, as described above, is taxed at the statutory rate for Israeli companies (see F below).

In the event of distribution by the Company of a cash dividend out of retained earnings that were tax exempt due to its approved enterprise status, the Company would have to pay a 25% corporate tax on the income from which the dividend was distributed. A 15% withholding tax may be deducted from dividends distributed to the recipients.

Up to date, the Company has not had earnings attributable to Approved Enterprise programs.

On January 6, 2011 an amendment to the Law for the Encouragement of Capital Investment-1959 (the "Law") was published. The amendment has a substantial effect on the current provisions of the Law. The followings are the major changes in the amendment:

1. A company located in Preferred Area A can file for both grants and tax benefits.
2. The requisites for benefits were changed with most significant change is that the Minimum investment requirement was removed. In addition the definition of Approved entity was changed.
3. The income attribution based on revenues was cancelled, the result is that Approved entity would be taxable on its' entire income at a fixed rate.
4. Tax exemption was cancelled.
5. Dividend payable from preferred income would be tax exempt.
6. The Grant Rate out of the approved investment would be up to 24%.

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 9 - INCOME TAXES (Cont.)

A. Law for the Encouragement of Capital Investments – 1959 (cont.)

The Tax rates applicable to Approved Industrial Enterprise would be 6% and 12% for those located in Preferred Area A or elsewhere, respectively, with effectiveness for the taxable year of 2015 and onwards. Prior to 2015 the following tax rates will be applicable:

For the years 2011-2012, 10% and 15% respectively and for the years 2013-2014, 7% and 12.5% respectively.

B. Law for the Encouragement of Industry (Taxation), 1969

The Company is an "Industrial Company" under the Law for the encouragement of Industry (Taxation), 1969 and, therefore, is entitled to certain tax benefits, mainly accelerated rates of depreciation.

C. Deferred Taxes

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company and its subsidiary deferred tax assets are as follows:

	As of December 31, 2011	2010
Israel net operating loss carry-forwards (*)	$ 6,231	$ 7,170
U.S. net operating loss carry-forwards	-	29
Temporary differences relating to reserve and allowances	1,709	1,413
Total net deferred tax asset before valuation allowance	7,940	8,612
Valuation allowance	(5,440)	(8,612)
Net deferred tax asset	$ 2,500	$ -

(*) Deferred taxes were calculated based on effective tax rates.

Under ASC 740-10, deferred tax assets are to be recognized for the anticipated tax benefits associated with net operating loss carry-forwards and deductible temporary differences; unless it is more-likely-than-not that some or all of the deferred tax assets will not be realized. The adjustment is made by a valuation allowance. Since the realization of the net operating loss carry-forwards and deductible temporary differences in 2010 and 2009 was not considered more likely than not, a valuation allowance has been established for the full amount of the tax benefits.

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 9 - INCOME TAXES (Cont.)

C. Deferred Taxes

For 2011, based on historical taxable income from continuing operations and projections for future taxable income the Company determined that it is more likely than not that some of its deferred tax assets are expected to be realized, and reversed part of the valuation allowance. The reversal of the valuation allowance and other adjustments to the deferred tax assets resulted in the recognition of tax benefit of $2,500 in 2011.

The Company has accumulated losses for Israeli income tax purposes as of December 31, 2011, 2010 and 2009 in the amount of approximately $25,000, $60,000 and $78,000, respectively. These losses may be carried forward and offset against taxable income in the future for an indefinite period.

D. Tax Reconciliation

The following is a reconciliation of the theoretical tax expense, assuming that all income is taxed at the ordinary statutory average corporate tax rate in Israel and the actual tax expense in the statement of operations, is as follows:

	Year Ended December 31,		
	2011	2010	2009
Net income before taxes	$ 25,618	$ 22,175	$ 2,631
Theoretical tax expenses	6,148	5,544	684
Permanent differences, including difference between the basis of measurement of income reported for tax purposes and the basis of measurement of income for financial reporting purposes - net	36	117	63
Deferred taxes on carryforward tax losses for which valuation allowance was provided	(3,731)	-	-
Change in valuation allowance	(4,881)	(5,609)	(783)
Other	(72)	(52)	36
	(8,648)	(5,544)	(684)
Actual tax expense (benefit)	$ (2,500)	$ -	$ -

E. Effective Tax Rates

The Company’s effective tax rates differ from the statutory rates applicable to the Company for all years presented due primarily to its tax losses carry-forward.

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 9 - INCOME TAXES (Cont.)

F. Tax Assessments

The Company has either received final tax assessments or the applicable statute of limitations rules have become effective through tax year 2007. One subsidiary received final tax assessments through tax year 2007. The other subsidiaries did not receive final tax assessments since their incorporation.

G. Uncertain Tax Positions

The taxation of the Company's business is subject to the application of multiple and sometimes conflicting tax laws and regulations as well as multinational tax conventions. The application of tax laws and regulations is subject to legal and factual interpretation, judgment and uncertainty. Tax laws themselves are subject to change as a result of changes in fiscal policy, changes in legislation and the evolution of regulations and court rulings. Consequently, taxing authorities may impose tax assessments or judgments against the Company that could materially impact its tax liability and/or its effective income tax rate.

H. Income from other sources in Israel

Income not eligible for benefits under the Approved Enterprise Law mentioned in a. above is taxed at the corporate tax rate of 26% in 2009, 25% in 2010 and 24% in 2011. On December 6, 2011, the "Tax Burden Distribution Law" Legislation Amendments (2011) was published in the official gazette, under which the previously approved gradual decrease in corporate tax was cancelled. The corporate tax rate increased to 25% from 2012.

NOTE 10 - GEOGRAPHIC AREAS AND MAJOR CUSTOMERS

A. Sales by geographic area (as percentage of total sales):

	Year ended December 31,		
	2 0 1 1	2 0 1 0	2 0 0 9
	%	%	%
USA	20	40	27
Europe	8	2	3
Japan	3	5	12
Asia Pacific excluding Japan	69	53	58
Total	100	100	100

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 10 - GEOGRAPHIC AREAS AND MAJOR CUSTOMERS (Cont.)

B. Sales by major customers (as percentage of total sales):

	Year ended December 31,		
	2011	2010	2009
	%	%	%
Customer A	6	17	21
Customer B	1	3	4
Customer C	3	8	5
Customer D	29	24	46
Customer E	5	13	-
Customer F	8	15	-
Customer G	9	-	-
Customer H	6	-	-
Others	33	20	24
Total	100	100	100

C.Assets by location

Substantially all fixed assets are located in Israel.

NOTE 11 - TRANSACTIONS AND BALANCES WITH RELATED PARTIES

The total directors' fees (including the chairman of the Board) for the year 2011 amounted to $205 (2010 - $227, 2009 - $210). The number of stock options granted to directors in 2011 amounted to 50,000 (125,000 were granted in 2010 and 70,000 were granted in 2009). Revenue from sales to a related party in 2009 amounted $26.

NOTE 12 - FINANCIAL INSTRUMENTS

A. Fair value of financial instruments

A financial instrument is defined as cash, evidence of an ownership interest in an entity, or a contract that impose on one entity a contractual obligation either to deliver cash or receive cash or another financial instrument to or from a second entity. Examples of financial instruments include cash and cash equivalents, short-term interest-bearing bank deposits, held to maturity securities, trade accounts receivable, investments, trade accounts payable, accrued expenses, options and forward contracts.

At December 31, 2011 and 2010 the fair market value of the Company's financial instruments did not materially differ from their respective book value.

NOVA MEASURING INSTRUMENTS LTD.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(in thousands, except share and per share data)

NOTE 12 - FINANCIAL INSTRUMENTS (Cont.)

B. Hedging activities

The Company enters into forward contracts and currency options to hedge its balance sheet exposure as well as certain future cash flows in connection with certain operating expenses and anticipated probable transactions which are expected to be denominated in New Israeli Shekel ("NIS").

The Company is exposed to losses in the event of non-performance by counterparties to financial instruments; however, as the counterparties are major Israeli banks, the Company does not expect any counterparties to fail to meet their obligations. The Company does not hold or issue derivatives for trading purposes.

The notional amounts of the hedging instruments as of December 31, 2011 and December 31, 2010 were $8,905 and $5,901, respectively. The terms of all of these currency derivatives are less than one year.

Derivative Instruments

The fair value of derivative contracts as of December 31, 2011 and December 31, 2010 was as follows:

	Derivative Assets Reported in Other Current Assets December 31,		Derivative Liabilities Reported in Other Current Liabilities December 31,	
	2011	2010	2011	2010
Derivatives designated as hedging instruments	$ —	$ 338	$ 402	$ —

The following table represents the balance of derivative instruments as of December 31, 2011 and 2010, and their impact on accumulated other comprehensive income for the year ended December 31, 2011:

Balance at December 31,2010	$338
Amount of loss recognized in OCI	(244)
Amount of gain reclassified from OCI to income	(496)
Balance at December 31,2011	$(402)

The impact of derivative instrument on total operating expenses in the year ended December 31, 2011, 2010 and 2009 was:

	2011	2010	2009
Gain (loss) on derivative instruments	$ 496	$ 113	$ (315)

SIGNATURES

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

NOVA MEASURING INSTRUMENTS LTD.

By: /s/ Gabi Seligsohn
Gabi Seligsohn
President and Chief Executive Officer

Date: March 28, 2012

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EXHIBIT INDEX

Number	Description
1.1	Amended and Restated Articles of Association (incorporated by reference to Exhibit 1.1 to the Company's Annual Report on Form 20-F for 2008 filed with the Securities and Exchange Commission on March 30, 2009).
4.1	Option Plan 7A (incorporated by reference to Exhibit 4.1. to the Company's Registration Statement on Form S-8 filed with the Securities and Exchange Commission on May 17, 2004 (File No. 333-115554)).
4.2	Option Plan 7B (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8 filed with the Securities and Exchange Commission on March 7, 2005 (File No. 333-123158).
4.3	Option Plan 7C (incorporated by reference to Exhibit 4.20 of the Company's Annual Report on Form 20-F filed with the Securities and Exchange Commission on June 29, 2006).
4.4	Option Plan 8 (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8 filed with the Securities and Exchange Commission on December 29, 2005 (File No. 333-130745).
4.5	2007 Incentive Plan (incorporated by reference to Exhibit 99.1 to the Company's Registration Statement on Form S-8 filed with the Securities and Exchange Commission on November 5, 2007 (File No. 333-147140)(.
4.6	Letter of Indemnification and Exculpation for certain directors, officers and/or employees (incorporated by reference to Appendix C to the Company's Report on Form 6-K filed with the Securities and Exchange Commission on July 7, 2006).
4.7	Summary of Lease Agreements between Nova and Ef-Shar Ltd. (incorporated by reference to Exhibit 4.10 to the Company's Annual Report for 20-F for 2007 filed with the Securities and Exchange Commission on March 28, 2008).
4.8	Underwriting Agreement, dated February 4, 2010, by and among the Company, Needham & Company, LLC and Roth Capital Partners LLC (incorporated by reference to Exhibit 1.1 to the Company's Report on Form 6-K filed with the Securities and Exchange Commission on February 4, 2010).
4.9	Summary of Supplement to Lease Agreement, dated October 30, 2010, by and between Nova and Ef-Shar Ltd. (incorporated by reference to Exhibit 4.9 of the Company's Annual Report on Form 20-F filed with the Securities and Exchange Commission on March 30, 2011).
4.10	Summary of Supplement to Lease Agreement, dated May 15, 2011, by and between Nova and Ef-Shar Ltd. (filed herewith).
8.1	List of Subsidiaries (incorporated by reference to Exhibit 8.1 of the Company's Annual Report on Form 20-F filed with the Securities and Exchange Commission on March 30, 2011)
12.1	Certification required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended (filed herewith).
12.2	Certification required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended (filed herewith).
13.1	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith).
13.2	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith).

15.1	Consent of Brightman Almagor & Co. (filed herewith).
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase
101.DEF*	XBRL Taxonomy Extension Definition Linkbase
101.LAB*	XBRL Taxonomy Extension Label Linkbase
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase

* Pursuant to Rule 406T of Regulation S-T, these interactive data files are deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933 or Section 18 of the Securities Exchange Act of 1934 and otherwise are not subject to liability under these sections.