VEECO INSTRUMENTS INC
Form 10-K
February 22, 2012

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

ý **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**

For the transition period from to .
Commission file number 0-16244

VEECO INSTRUMENTS INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	**11-2989601**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
Terminal Drive **Plainview, New York** (Address of Principal Executive Offices)	**11803** (Zip Code)

Registrant's telephone number, including area code **(516) 677-0200**

Website: **www.veeco.com**

Securities registered pursuant to Section 12(b) of the Act:
Common Stock, par value $.01 per share

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ý 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 ý No o

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes o No ý

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 ý No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by references in Part III of this Form 10-K or any amendment to this Form 10-K. o

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ý	Accelerated filer o	Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). o Yes ý No

The aggregate market value of the voting stock held by non-affiliates of the Registrant, based on the closing price of the common stock on July 1, 2011 as reported on The Nasdaq National Market, was $2,057,494,571. Shares of common stock held by each officer and director and by each person who owns 10% or more of the outstanding common stock have been excluded from this computation in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

At February 21, 2012, the Registrant had 38,767,203 outstanding shares of common stock.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Proxy Statement for the Annual Meeting of Stockholders to be held on May 4, 2012 are incorporated by reference into Part III of this Annual Report on Form 10-K.

SAFE HARBOR STATEMENT

This Annual Report on Form 10-K (the "Report") contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Discussions containing such forward-looking statements may be found in Items 1, 3, 7 and 7A hereof, as well as within this Report generally. In addition, when used in this Report, the words "believes," "anticipates," "expects," "estimates," "plans," "intends" and similar expressions are intended to identify forward-looking statements. All forward-looking statements are subject to a number of risks and uncertainties that could cause actual results to differ materially from projected results. These risks and uncertainties include, without limitation, the following:

Our operating results have been, and may continue to be, adversely affected by unfavorable market conditions;

Market adoption of LED technology for general lighting could be slower than anticipated;

Our failure to successfully manage our outsourcing activities or failure of our outsourcing partners to perform as anticipated could adversely affect our results of operations and our ability to adapt to fluctuating order volumes;

The further reduction or elimination of foreign government subsidies and economic incentives may adversely affect the future order rate for our MOCVD equipment;

Our operating results have been, and may continue to be, adversely affected by tightening credit markets;

Our backlog is subject to customer cancellation or modification and such cancellation could result in decreased sales and increased provisions for excess and obsolete inventory and/or liabilities to our suppliers for products no longer needed;

The failure to estimate customer demand accurately could result in excess or obsolete inventory and\or liabilities to our suppliers for products no longer needed, while manufacturing interruptions or delays could affect our ability to meet customer demand;

The cyclicality of the industries we serve directly affects our business;

We rely on a limited number of suppliers, some of whom are our sole source for particular components;

Our sales to HB LED and data storage manufacturers are highly dependent on these manufacturers' sales for consumer electronics applications, which can experience significant volatility due to seasonal and other factors, which could materially adversely impact our future results of operations;

We are exposed to the risks of operating a global business, including the need to obtain export licenses for certain of our shipments and political risks in the countries we operate;

The timing of our orders, shipments, and revenue recognition may cause our quarterly operating results to fluctuate significantly;

We operate in industries characterized by rapid technological change;

We face significant competition;

We depend on a limited number of customers, located primarily in a limited number of regions, that operate in highly concentrated industries;

Our sales cycle is long and unpredictable;

Our inability to attract, retain, and motivate key employees could have a material adverse effect on our business;

The price of our common shares may be volatile and could decline significantly;

We are subject to foreign currency exchange risks;

The enforcement and protection of our intellectual property rights may be expensive and could divert our limited resources;

We may be subject to claims of intellectual property infringement by others;

Our acquisition strategy subjects us to risks associated with evaluating and pursuing these opportunities and integrating these businesses;

We may be required to take additional impairment charges for goodwill and indefinite-lived intangible assets or definite-lived intangible and long-lived assets;

Changes in accounting pronouncements or taxation rules or practices may adversely affect our financial results.

We are subject to internal control evaluations and attestation requirements of Section 404 of the Sarbanes-Oxley Act;

We are subject to risks of non-compliance with environmental, health and safety regulations.

We have significant operations in locations which could be materially and adversely impacted in the event of a natural disaster or other significant disruption;

We have adopted certain measures that may have anti-takeover effects which may make an acquisition of our Company by another company more difficult; and

The matters set forth in this Report generally, including the risk factors set forth in "Item 1A. Risk Factors."

Consequently, such forward-looking statements should be regarded solely as the Company's current plans, estimates, and beliefs. The Company does not undertake any obligation to update any forward-looking statements to reflect future events or circumstances after the date of such statements.

Item 1. Business

The Company

Veeco Instruments Inc. (together with its consolidated subsidiaries, "Veeco," the "Company" or "we") creates Process Equipment solutions that enable technologies for a cleaner and more productive world. We design, manufacture and market equipment primarily sold to make light emitting diodes ("LEDs") and hard-disk drives, as well as for emerging applications such as concentrator photovoltaics, power semiconductors, wireless components, microelectromechanical systems (MEMS), and other next-generation devices.

Veeco focuses on developing highly differentiated, "best-in-class" Process Equipment products for critical performance steps. Our products feature leading technology, low cost-of-ownership and high throughput, offering a time-to-market advantage for our customers around the globe. Core competencies in advanced thin film technologies, over 150 patents and decades of specialized process know-how helps us to stay at the forefront of these demanding industries.

Veeco's LED & Solar segment designs and manufactures metal organic chemical vapor deposition ("MOCVD") and molecular beam epitaxy ("MBE") systems and components sold to manufacturers of LEDs, wireless devices, power semiconductors, and concentrator photovoltaics, as well as to R&D applications. In 2011 we discontinued the sale of our products related to Copper, Indium, Gallium, Selenide ("CIGS") solar systems technology.

Veeco's Data Storage segment designs and manufactures the critical technologies used to create thin film magnetic heads ("TFMHs") that read and write data on hard disk drives. These technologies include ion beam etch (IBE), ion beam deposition (IBD), diamond-like carbon (DLC), physical vapor deposition (PVD), chemical vapor deposition (CVD), and slicing, dicing and lapping systems. While these technologies are primarily sold to hard drive customers, they also have applications in optical coatings and other markets.

Veeco's approximately 900 employees support our customers through product and process development, training, manufacturing, and sales and service sites in the U.S., Korea, Taiwan, China, Singapore, Japan, Europe and other locations.

Veeco Instruments was organized as a Delaware corporation in 1989.

Our Growth Strategy

Veeco's growth strategy consists of:

Providing differentiated Process Equipment technology solutions to address customers' next generation product development roadmaps;

Investing to win through focused research and development spending in end markets that we believe provide significant growth opportunities or are at an inflection point in Process Equipment requirements. Examples include LED, power semiconductor devices, MEMS, and the concentrator photovoltaic market;

Leveraging our world-class sales channel and local process applications support to build strong strategic relationships with technology leaders in all key regions;

Expanding our portfolio of service products that improve the performance of our systems, including spare parts, upgrades and consumables to drive additional growth and improve customer satisfaction.

Combining outsourced and internal manufacturing strategies to appropriately flex capacity through industry investment cycles;

Pursuing partnerships and strategic mergers and acquisitions to expand our portfolio of Process Equipment technologies and accelerate our growth.

Business Overview and Industry Trends

General Introduction: Our deposition, etch and other technologies are applicable to the creation of a broad range of microelectronic components, including LEDs, solar cells, thin film magnetic heads and compound semiconductor devices such as wireless components and power electronics. Our customers who manufacture these devices continue to invest in new technology equipment in order to advance their next generation products and deliver more efficient and cost effective technology solutions.

Following the global recession in 2008-2009, Veeco experienced a rapid improvement in business conditions in late 2009 and 2010. The combination of an improvement in capital spending by our global customers as well as our focus on high-growth end markets, particularly LED, and successful new product introductions enabled the Company to benefit from growth and market share gains in 2010 and 2011. Veeco's revenues increased over 200% in 2010 and 5% in 2011.

The following is a review of our two business segments and the multi-year technology trends that impact each.

LED & Solar Business Overview and Trends: We are a leading supplier of equipment solutions used to create high brightness LEDs and solar cells. MOCVD and MBE technologies are used to grow compound semiconductor materials (such as GaN (gallium nitride), GaAs (gallium arsenide), AlInGaP (aluminum indium gallium phosphide) and InP (indium phosphide)) at the atomic scale. Epitaxy is the critical first step in compound semiconductor wafer fabrication and is considered to be the highest value added process, ultimately determining device functionality and performance.

We believe that the LED market, while cyclical, represents a multi-year secular growth opportunity for us due to the expanding applications for LEDs, such as general illumination, backlighting for large screen flat panel TVs, mobile phones, tablet and laptop computers and automotive applications. According to Strategies Unlimited, a leading market research firm, 2010 revenues for high brightness LEDs for all applications grew by 108% to $11.2 billion, and despite a slowdown in overall TV demand in 2011, grew by another 10% in 2011 to $12.3 billion.

The demand for MOCVD tools to grow GaN based materials (the thin films that convert energy to light) to make LEDs for these applications grew dramatically beginning in mid-2009, with merchant industry shipments of MOCVD reactors growing from approximately 230 reactors in 2009, to approximately 800 reactors in 2010 and over 700 in 2011 (Source: Veeco and competitor financial results). Established LED industry leaders in Taiwan, U.S., Europe, Korea and Japan, as well as emerging players in China spurred by government incentives and economic development funding, all invested heavily in MOCVD equipment to ramp LED capacity. However, the industry is currently experiencing an overcapacity situation, evidenced by low tool utilization rates being reported by many key global customers. As a result, new orders for Veeco's MOCVD systems declined sharply in both the third and fourth quarters of 2011. In the short term, it is difficult for us to predict when the supply/demand of LEDs will return to equilibrium and what the demand for our MOCVD products will be. According to the Semiconductor Equipment and Materials Industry's (SEMI) January 2012 Opto/LED Fab Watch report, worldwide MOCVD purchases will decline by 40% in 2012 compared to 2011.

While consumer electronics have been the dominant end markets for LED technology over the past decade, and for which most of the new MOCVD capacity was installed, these applications are expected to reach saturation in the next few years. Conversely, the general lighting market is in its infancy and we believe that thousands of additional MOCVD tools will be required over the next few years as LEDs become widely adopted for this much larger market application. Industry research group

IMS forecasts that LEDs for solid state lighting will represent $13.3 billion in revenue from 2013 through 2015, and that lighting will become the largest end market for LEDs during this time frame. As a comparison, LEDs for the TV backlighting market represented $4.3 billion in revenue from 2009-2011.

As part of the shift toward more efficient energy use across the globe, we believe LED technology will play a key role as both an energy and cost savings lever in the area of lighting. We see this opportunity as both vast and long term in nature given that LED lighting is just now beginning to penetrate the global lighting market which accounts for close to 20% of world-wide electricity consumption. LED adoption is happening initially in outdoor and industrial lighting where high usage and lower efficiency make incumbent lighting costly. Further adoption across all forms of lighting is expected to occur in the coming years with rapidly declining LED costs, shortening payback periods versus conventional lighting technologies, and "ban-the-bulb" legislation now underway in more than 20 countries around the globe. Similar to Moore's Law in semiconductors, technology advancements in the LED industry have followed a consistent cadence known as Haitz's Law, which states that luminous flux for LEDs will increase 20X each decade, while over the same period costs will fall by 10x. This implies a 25-35% increase in efficacy in each generation of new LEDs. In addition to the incandescent bulb phase-outs, many countries have begun to implement policies to accelerate adoption of LEDs. These include China's "10 cities 10,000 lights" program, South Korea's "20-60" plan targeting 60% penetration of lighting on a national level by 2020, and Japan's "Basic Energy Plan" with specific goals for energy efficient lighting.

Future equipment and capital spending will continue to drive cost reduction in LED technology through larger wafers, automation and dedicated equipment specifically designed to improve manufacturing yield and throughput for lighting class LED product. In order to maximize this opportunity we have accelerated our R&D investments over the past few years to introduce several generations of MOCVD tools, most recently our TurboDisc® K-Series and MaxBright® MOCVD systems. By introducing new systems, we are focused on delivering better uniformity and repeatability, which helps our customers to make LEDs of consistent quality, ultimately with the goal to deliver more, high quality LEDs at a lower manufacturing cost. Despite the forecasted decline in the MOCVD market in 2012, we intend to continue to invest heavily in research and development in order to deliver more advanced MOCVD solutions to our customers and accelerate lighting industry adoption of LEDs. In addition to new systems sales, we are increasing our focus on supporting our customers with tool upgrades to improve their performance as well as selling additional after-market services, such as training, process applications support, warranties, spare parts and consumables.

A related MOCVD application for us is in the solar market, since the same MOCVD tool that is critical to the LED manufacturing process can also be used to manufacture high-efficiency triple junction solar cells, otherwise known as Concentrator Photovoltaic (CPV). Arsenide phosphide (As/P) MOCVD is the technology of choice to build the critical compound semiconductor layers for the CPV device. Veeco currently sells a small number of MOCVD systems each year for this new application. CPV Solar is emerging as a new technology niche with proof-of-concept scale installations (1MW or less), and in 2012 and 2013 multiple pilot production utility-scale projects are being developed around the world. According to solar market research firm GTM's 2011 report, new CPV installations will grow from under 5MW in 2010 to more than 1,000MW globally by 2015.

Another new market opportunity for our MOCVD tools is the power semiconductor market. Silicon-based transistors are the mainstream forms of power electronic devices today. However, GaN-based power electronics, developed on MOCVD tools, can potentially deliver higher performance (higher efficiency and switching speed) than silicon. Global industry leaders in power electronics are currently working on research and development programs, many in partnership with Veeco, to explore this new technology opportunity. Examples of the wide array potential applications for GaN-based power devices include those in information technology and consumer devices (power supplies,

inverters), automotive (hybrid automobiles) and industrial applications (power distribution, rail transportation and wind turbines). Additionally, Veeco is actively engaged with customers around the globe that are developing GaN-on-Silicon (GaN-on-Si) based technologies to potentially lower LED manufacturing costs by depositing thin film materials on silicon rather than sapphire substrates.

Veeco's MBE systems, sources and components are used to manufacture critical epilayers in varied end applications such as solar cells, fiber-optics, mobile phones, satellites, radar systems and displays. Our business continues to be influenced by long-term market trends associated with the increasing demand for gallium arsenide (GaAs) devices to support the rapid adoption of smart phones within the larger mobile phone handset market. Each one of these complex devices contains an increasing number of power amplifiers or other compound semiconductor radio frequency (RF) components. Advanced RF solutions for leading edge smart phones and tablet computers are required to support increasing data transfer volumes and long term evolution (LTE) based wireless communications.

Data Storage Business Overview and Trends: Worldwide storage demand continues to increase, driven by proliferation of laptop and netbook PC's, intelligent internet storage, e-mail, external storage devices, and consumer applications (e.g. digital video recorders) reaching higher volume. While much has been written about the competition hard disk drives ("HDDs") face from flash memory, we believe that HDDs will continue to provide the best value for mass storage and will remain at the forefront of large capacity storage applications. According to data storage research firm TrendFocus' August 2011 report, HDDs are forecasted to grow at a CAGR of 8.1% from 2011 to 2015.

While technology change continues in data storage, the industry has gone through a period of maturation, including vertical integration and consolidation. A recovery in capital spending by our key data storage customers in 2010, combined with the successful introduction of several new deposition tools to advance areal density, enabled Veeco to report revenue growth in both 2010 and 2011. Natural disasters in Japan (tsunami) and Thailand (floods) caused major disruptions to the HDD supply chain in 2011. Despite these disruptions the floods in Thailand resulted in an unexpected increase in orders in the fourth quarter of 2011.

Throughout these cycles, Veeco continues to invest in developing systems to support advanced technologies such as heat assisted magnetic recording (HAMR). HAMR is a technology that magnetically records data on high-stability media using laser thermal assistance to first heat the material. HAMR takes advantage of high-stability magnetic compounds that can store single bits in a much smaller area than in current hard drive technology. Veeco's Data Storage business is centered around core technologies where we have a leadership position. We utilize a flexible manufacturing strategy which helps mitigate the impact of industry cycles. In addition, Veeco's product development team has begun to identify non-hard drive market applications (such as LED and MEMS) for our key Data Storage technologies including mechanical process tools, etch and deposition technologies.

Our Products

We have two business segments, LED & Solar and Data Storage. Net sales for these business segments are illustrated in the following table:

	Year ended December 31,		
	2011	2010	2009
	(Dollars in millions)		
LED & Solar	**$ 827.8**	**$ 795.6**	**$ 205.0**
% of net sales	84.5%	85.5%	72.6%
Data Storage	**$ 151.3**	**$ 135.3**	**$ 77.3**
% of net sales	15.5%	14.5%	27.4%
Total net sales	**$ 979.1**	**$ 930.9**	**$ 282.3**

See Note 11 to our Consolidated Financial Statements for additional information regarding our reportable segments and sales by geographic location.

LED & Solar

Metal Organic Chemical Vapor Deposition Systems (MOCVD): We are one of the world's leading suppliers of MOCVD technology. MOCVD production systems are used to make GaN-based devices (green and blue LEDs) and As/P-based devices (red, orange and yellow LEDs), which are used today in television and laptop backlighting, general illumination, large area signage, specialty illumination and many other applications. Our As/P MOCVD Systems also are used to make high-efficiency concentrator photovoltaics. In 2011 Veeco introduced the industry's first production-proven multi-chamber MOCVD system, the MaxBright® for high-volume production of LEDs.

Molecular Beam Epitaxy Systems (MBE): MBE is the process of precisely depositing epitaxially aligned atomically thin crystal layers, or epilayers, of elemental materials onto a substrate in an ultra-high vacuum environment. For many compound semiconductors, MBE is the critical first step of the fabrication process, ultimately determining device functionality and performance. We provide MBE systems and components for the production of wireless devices (power amplifiers, high electron mobility transistors or hetero-junction bipolar transistors (pHEMTS and HBTs)) and a broad array of compound semiconductor materials research applications.

Data Storage

Ion Beam Deposition ("IBD") Systems: Our NEXUS® IBD systems utilize ion beam technology to deposit precise layers of thin films and may be included on our cluster system platform to allow either parallel or sequential etch/deposition processes. IBD systems deposit high purity thin film layers and provide maximum uniformity and repeatability. In addition to IBD systems, we provide a broad array of ion beam sources. These technologies are applicable in the hard drive industry as well as for optical coatings and other end markets.

Ion Beam Etch ("IBE") Systems: Our NEXUS IBE systems etch precise, complex features for use primarily by data storage and telecommunications device manufacturers in the fabrication of discrete and integrated microelectronic devices.

Physical Vapor Deposition ("PVD") Systems: Our NEXUS PVD systems offer manufacturers a highly flexible deposition platform for developing next-generation data storage applications.

Diamond-Like Carbon ("DLC") Deposition Systems: Our DLC deposition systems deposit protective coatings on advanced TFMHs.

Chemical Vapor Deposition ("CVD") Systems: Our NEXUS CVD systems deposit conformal films for advanced TFMH applications.

Precision Lapping, Slicing, and Dicing Systems: Our Optium® products generally are used in "back-end" applications in a data storage fab where TFMHs or "sliders" are fabricated. This equipment includes lapping tools, which enable precise material removal within three nanometers, which is necessary for next generation TFMHs. We also manufacture tools that slice and dice wafers into rowbars and TFMHs.

Service and Sales

We sell our products and services worldwide through various strategically located sales and service facilities in the U.S., Europe and Asia Pacific, and we believe that our customer service organization is a significant factor in our success. We provide service and support on a warranty, service contract or an individual service-call basis. We offer enhanced warranty coverage and services, including preventative maintenance plans, on-call and on-site service plans and other comprehensive service arrangements, product and application training, consultation services, and a 24-hour hotline service for certain products. We believe that offering timely support creates stronger relationships with customers and provides us with a significant competitive advantage. Revenues from the sale of parts, service and support represented approximately 10%, 8% and 16% of our net sales for the years ended December 31, 2011, 2010 and 2009, respectively. Parts sales represented approximately 6%, 5% and 9% of our net sales for those years, respectively, and service and support sales were 4%, 3% and 7%, respectively.

Customers

We sell our products to many of the world's major HB LED, solar and hard drive manufacturers as well as to customers in other industries, research centers, and universities. We rely on certain principal customers for a significant portion of our sales. Sales to Elec-Tech International Co. Ltd. and Sanan Optoelectronics each accounted for more than 10% of Veeco's total net sales in 2011, LG Innotek Co. Ltd., Seoul OptoDevice Co. Ltd. and Sanan Optoelectronics each accounted for more than 10% of Veeco's total net sales in 2010 and LG Innotek Co. Ltd. and Seagate Technology, Inc. each accounted more than 10% of Veeco's total net sales in 2009. If any principal customer discontinues its relationship with us or suffers economic difficulties, our business, prospects, financial condition and operating results could be materially and adversely affected.

Research and Development and Marketing

Our marketing and research and development functions are organized by business unit. We believe that this organizational structure allows each business unit manager to more closely monitor the products for which he is responsible, resulting in more efficient marketing and research and development. Our research and development activities are organized by business unit and take place at our facilities in Plainview, New York; Camarillo, California; Ft. Collins, Colorado; Somerset, New Jersey; St. Paul, Minnesota; and Korea.

We believe that continued and timely development of new products and enhancements to existing products are necessary to maintain our competitive position. We work collaboratively with our customers to help ensure our technology and product roadmaps are aligned with customer requirements. Our research and development programs are organized by business unit and new or improved products have been introduced into each of our product lines in each of the past three years.

Our research and development expenses were approximately $96.6 million, $56.9 million and $37.8 million, or approximately 10%, 6% and 13% of net sales for the years ended December 31, 2011, 2010 and 2009, respectively. These expenses consisted primarily of salaries, project materials and other product development and enhancement costs.

Suppliers

We currently outsource certain functions to third parties, including the manufacture of all or substantially all of our new MOCVD systems, Data Storage systems and ion sources. We primarily rely on several suppliers for the manufacturing of these systems. In addition, certain of the components and sub-assemblies included in our products are obtained from a single source or a limited group of suppliers.

Backlog

Our backlog decreased to $332.9 million as of December 31, 2011 from $535.4 million as of December 31, 2010. During the year ended December 31, 2011, we experienced net backlog adjustments of approximately $41.4 million. The adjustments consisted of $38.1 million of order cancellations and $3.3 million related to other order adjustments. During the year ended December 31, 2011, we had a net positive adjustment related to foreign currency translation of $0.1 million.

Our backlog consists of orders for which we received a firm purchase order, a customer-confirmed shipment date within twelve months and a deposit, where required.

Competition

In each of the markets that we serve, we face substantial competition from established competitors, some of which have greater financial, engineering and marketing resources than us, as well as from smaller competitors. In addition, many of our products face competition from alternative technologies, some of which are more established than those used in our products. Significant factors for customer selection of our tools include system performance, accuracy, repeatability, ease of use, reliability, cost of ownership and technical service and support. We believe that we are competitive based on the customer selection factors in each market we serve. None of our competitors compete with us across all of our product lines.

We compete with manufacturers such as Aixtron, Applied Materials, Canon Anelva Corporation, DCA Instruments, Leybold Optics, Oerlikon Balzers, Oxford Instruments, Toyo Nippon Sanso and Riber.

Intellectual Property

Our success depends in part on our proprietary technology. Although we attempt to protect our intellectual property rights through patents, copyrights, trade secrets and other measures, there can be no assurance that we will be able to protect our technology adequately or that competitors will not be able to develop similar technology independently.

We have patents and exclusive and non-exclusive licenses to patents owned by others covering certain of our products, which we believe provide us with a competitive advantage. We have a policy of seeking patents on inventions concerning new products and improvements as part of our ongoing research, development and manufacturing activities. We believe that there is no single patent or exclusive or non-exclusive license to patents owned by others that is critical to our operations, as the success of our business depends primarily on the technical expertise, innovation, customer satisfaction and experience of our employees.

We also rely upon trade secret protection for our confidential and propriety information. There can be no assurance that others will not independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or that we can meaningfully protect our trade secrets. In addition, we cannot be certain that we will not be sued by third parties alleging that we have infringed their patents or other intellectual property rights. If any third party sues us, our business, results of operations or financial condition could be materially adversely affected.

Employees

As of December 31, 2011, we had 917 employees, of which there were 195 in manufacturing and testing, 118 in sales and marketing, 187 in service and product support, 288 in engineering, research and development and 129 in information technology, general administration and finance. In addition, we also had 46 temporary employees/outside contractors, which support our variable cost strategy. The success of our future operations depends in large part on our ability to recruit and retain engineers,

technicians and other highly-skilled professionals who are in considerable demand. We feel that we have adequate programs in place to attract, motivate and retain our employees. We plan to monitor industry practices to make sure that our compensation and employee benefits remain competitive. However, there can be no assurance that we will be successful in recruiting or retaining key personnel. We believe that our relations with our employees are good.

Available Information

We file annual, quarterly and current reports, information statements and other information with the Securities and Exchange Commission (the "SEC"). The public may obtain information by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that site is *www.sec.gov*.

Internet Address

We maintain a website where additional information concerning our business and various upcoming events can be found. The address of our website is *www.veeco.com*. We provide a link on our website, under Investors Financial SEC Filings, through which investors can access our filings with the SEC, including our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to those reports. These filings are posted to our website, as soon as reasonably practicable after we electronically file such material with the SEC.

Item 1A. Risk Factors

Risk Factors That May Impact Future Results

In addition to the other information set forth herein, the following risk factors should be carefully considered by shareholders of and potential investors in the Company.

Our operating results have been, and may continue to be, adversely affected by unfavorable market conditions.

Market conditions relative to the segments in which we operate have deteriorated significantly in many of the countries and regions in which we do business, and may remain depressed for the foreseeable future. Our MOCVD order volumes decreased significantly in the latter part of 2011 and are expected to remain depressed during 2012 and possibly beyond. Foreign government incentives designed to encourage the development of the LED industry have been curtailed, and the demand for our MOCVD products has softened. We have experienced and may continue to experience customer rescheduling and, to a lesser extent, cancellations of orders for our products. Actual market conditions and ordering volumes in 2012 and beyond may be worse than currently forecasted. Continuing adverse market conditions relative to our products would negatively impact our business, and could result in:

Further reduced demand for our products;

Further rescheduling and cancellations of orders for our products, resulting in negative backlog adjustments;

Increased price competition and lower margin for our products;

Increased competition from sellers of used equipment or lower-priced alternatives to our products;

Increased risk of excess and obsolete inventories;

Increased risk in the collectability of amounts due from our customers;

Increased risk in potential reserves for doubtful accounts and write-offs of accounts receivable;

Disruptions in our supply chain as we reduce our purchasing volumes and limit our contract manufacturing operations; and

Higher operating costs as a percentage of revenues.

If the markets in which we participate experience a protracted downturn and/or a slow recovery period, this could negatively impact our sales and revenue generation, margins and operating expenses, and consequently have a material adverse effect on our business, financial condition and results of operations.

Market adoption of LED technology for general lighting could be slower than anticipated.

Our future business prospects depend largely on the adoption of LED technology for general illumination applications, including residential, commercial and street lighting markets. Potential barriers to adoption include higher initial costs and customer familiarity with, and substantial investment and know-how in, existing lighting technologies. While the use of LED technology for general lighting has grown in recent years, challenges remain and widespread adoption may not occur at currently projected rates. The adoption of, or changes in, government policies that discourage the use of traditional lighting technologies may impact LED adoption rates and, in turn, the demand for our products. Furthermore, if new technologies evolve as a viable alternative to LED devices, our current products and technology could be placed at a competitive disadvantage or become obsolete altogether. Delays in the adoption of LED technology for general lighting purposes could materially and adversely affect our business, financial condition and results of operations.

Our failure to successfully manage our outsourcing activities or failure of our outsourcing partners to perform as anticipated could adversely affect our results of operations and our ability to adapt to fluctuating order volumes.

To better align our costs with market conditions, increase the percentage of variable costs relative to total costs and to increase productivity and operational efficiency, we have outsourced certain functions to third parties, including the manufacture of all or substantially all of our new MOCVD systems, Data Storage systems and ion sources. We are relying heavily on our outsourcing partners to perform their contracted functions and to allow us the flexibility to adapt to changing market conditions, including periods of significantly diminished order volumes. If our outsourcing partners do not perform as required, or if our outsourcing model does not allow us to realize the intended cost savings and flexibility, our results of operations (and those of our third party providers) may be adversely affected. Disputes and possibly litigation involving third party providers could result and we could suffer damage to our reputation. Dependence on contract manufacturing and outsourcing may also adversely affect our ability to bring new products to market. Although we attempt to select reputable providers, it is possible that one or more of these providers could fail to perform as we expect. In addition, the role of third party providers has required and will continue to require us to implement changes to our existing operations and adopt new procedures and processes for retaining and managing these providers in order to realize operational efficiencies, assure quality, and protect our intellectual property. If we do not effectively manage our outsourcing strategy or if third party providers do not perform as anticipated, we may not realize the benefits of productivity improvements and we may experience operational difficulties, increased costs, manufacturing and/or installation interruptions or delays, inefficiencies in the structure and/or operation of our supply chain, loss of intellectual property rights, quality issues, increased product time-to-market and/or inefficient allocation of human resources, any or all of which could materially and adversely affect our business, financial condition and results of operations.

The further reduction or elimination of foreign government subsidies and economic incentives may adversely affect the future order rate for our MOCVD equipment.

Approximately 66% and 29% of our revenues were generated in China for the years ended December 31, 2011 and December 31, 2010, respectively. In recent years, the Chinese government has provided various incentives to encourage development of the LED industry, including subsidizing a significant portion of the purchase cost of MOCVD equipment. These subsidies have enabled and encouraged certain customers in this region to purchase more of our MOCVD equipment than these customers might have purchased without these subsidies. These subsidies have now been curtailed and are expected to further decline over time and may end at some point in the future. The further reduction or elimination of these incentives may result in a further reduction in future orders for our MOCVD equipment in this region which could materially and adversely affect our business, financial condition and results of operations.

A related risk is that many customers use or had planned to use Chinese government subsidies, in addition to other incentives from the Chinese government, to build new manufacturing facilities or to expand existing manufacturing facilities. Delays in the start-up of these facilities or the cancellation of construction plans altogether, together with other related issues pertaining to customer readiness, could adversely impact the timing of our revenue recognition, could result in further order cancellations, and could have other negative effects on our financial condition and operating results.

Our operating results have been, and may continue to be, adversely affected by tightening credit markets.

As a global company with worldwide operations, we are subject to volatility and adverse consequences associated with worldwide economic downturns. As seen in recent years, in the event of a worldwide downturn, many of our customers may delay or further reduce their purchases of our products and services. If negative conditions in the global credit markets prevent our customers' access to credit, product orders in these channels may decrease which could result in lower revenue. Likewise, if our suppliers face challenges in obtaining credit, in selling their products or otherwise in operating their businesses, they may become unable to continue to offer the materials we use to manufacture our products. With the recent downturn in our MOCVD segment, we have experienced, and may continue to experience, lower than anticipated order levels, cancellations of orders in backlog, rescheduling of customer deliveries, and attendant pricing pressures, all of which could adversely affect our results of operations.

Furthermore, tightening macroeconomic measures and monetary policies adopted by China's government aimed at preventing overheating of China's economy and controlling China's high level of inflation have limited, and may continue to limit, the availability of financing to our customers in this region. Limited financing, or delays in the timing of such financing, may result in delays and cancellations of shipments of our products (and associated revenues) conditioned on such financing.

In addition, we finance a portion of our sales through trade credit. In addition to ongoing credit evaluations of our customers' financial condition, we seek to mitigate our credit risk by obtaining deposits and/or letters of credit on certain of our sales arrangements. We could suffer significant losses if a customer whose accounts receivable we have not secured fails or is otherwise unable to pay us. A significant loss in collections on our accounts receivable would have a negative impact on our financial results.

Our backlog is subject to customer cancellation or modification and such cancellation could result in decreased sales and increased provisions for excess and obsolete inventory and/or liabilities to our suppliers for products no longer needed.

Customer purchase orders are subject to cancellation or rescheduling by the customer, sometimes with limited or no penalties. Often, we have incurred expenses prior to such cancellation without adequate monetary compensation. During the year ended December 31, 2011, we experienced net backlog adjustments of approximately $41.4 million. The adjustment consisted of $38.1 million of order cancellations and $3.3 million related to other order adjustments, partially offset by $0.1 million of adjustments related to foreign currency translation. The current and forecasted downturn in our MOCVD segment could result in further increases in order cancellations and/or postponements.

We record a provision for excess and obsolete inventory based on historical and future usage trends and other factors including the consideration of the amount of backlog we have on hand at any particular point in time. If our backlog is canceled or modified, our estimates of future product demand may prove to be inaccurate, in which case we may have understated the provision required for excess and obsolete inventory. In the future, if we determine that our inventory is overvalued, we will be required to recognize such costs in our financial statements at the time of such determination. In addition, we place orders with our suppliers based on our customers' orders to us. If our customers cancel their orders with us, we may not be able to cancel our orders with our suppliers and may be required to take a charge for these cancelled commitments to our suppliers. Any such charges could be material to our results of operations and financial condition.

The failure to estimate customer demand accurately could result in excess or obsolete inventory and\or liabilities to our suppliers for products no longer needed, while manufacturing interruptions or delays could affect our ability to meet customer demand.

Our business depends on our ability to accurately forecast and supply equipment, services and related products that meet the rapidly changing technical and volume requirements of our customers, which depends in part on the timely delivery of parts, components and subassemblies (collectively, parts) from suppliers. The current uncertain worldwide economic conditions and market instabilities make it increasingly difficult for us (and our customers and our suppliers) to accurately forecast future product demand. If actual demand for our products is different than expected, we may purchase more/fewer parts than necessary or incur costs for canceling, postponing or expediting delivery of parts. If we overestimate the demand for our products, excess inventory could result which could be subject to heavy price discounting, which could become obsolete, and which could subject us to liabilities to our suppliers for products no longer needed. In addition, the volatility of demand for capital equipment increases capital, technical and other risks for companies in the supply chain.

Furthermore, some key parts may be subject to long lead-times and/or obtainable only from a single supplier or limited group of suppliers, and some sourcing or subassembly is provided by suppliers located in countries other than the United States. We may experience significant interruptions of our manufacturing operations, delays in our ability to deliver products or services, increased costs or customer order cancellations as a result of:

- the failure or inability of suppliers to timely deliver quality parts;
- volatility in the availability and cost of materials;
- difficulties or delays in obtaining required import or export approvals;
- information technology or infrastructure failures;
- natural disasters (such as earthquakes, tsunamis, floods or storms); or

other causes (such as regional economic downturns, pandemics, political instability, terrorism, or acts of war) could result in delayed deliveries, manufacturing inefficiencies, increased costs or order cancellations.

In addition, in the event of an unanticipated increase in demand for our products, our need to rapidly increase our business and manufacturing capacity may be limited by working capital constraints of our suppliers and may exacerbate any interruptions in our manufacturing operations and supply chain and the associated effect on our working capital. Any or all of these factors could materially and adversely affect our business, financial condition and results of operations.

The cyclicality of the industries we serve directly affects our business.

Our business depends in large part upon the capital expenditures of manufacturers in the HB LED and data storage markets. We are subject to the business cycles of these industries, the timing, length, and volatility of which are difficult to predict. These industries have historically been highly cyclical and have experienced significant economic downturns in the last decade. As a capital equipment provider, our revenues depend in large part on the spending patterns of these customers, who often delay expenditures or cancel or reschedule orders in reaction to variations in their businesses or general economic conditions. In downturns, we must be able to quickly and effectively align our costs with prevailing market conditions, as well as motivate and retain key employees. However, because a proportion of our costs are fixed, our ability to reduce expenses quickly in response to revenue shortfalls may be limited. Downturns in one or more of these industries, including the current MOCVD downturn, have had and will likely have a material adverse effect on our business, financial condition and operating results. Alternatively, during periods of rapid growth, we must be able to acquire and/or develop sufficient manufacturing capacity to meet customer demand, and attract, hire, assimilate and retain a sufficient number of qualified people. We cannot give assurances that our net sales and operating results will not be adversely affected if our customers experience economic downturns or slowdowns in their businesses.

We rely on a limited number of suppliers, some of whom are our sole source for particular components.

We currently outsource certain functions to third parties, including the manufacture of all or substantially all of our new MOCVD systems, Data Storage systems and ion sources. We primarily rely on several suppliers for the manufacturing of these systems. We plan to maintain some level of internal manufacturing capability for these systems. The failure of our present suppliers to meet their contractual obligations under our supply arrangements and our inability to make alternative arrangements or resume the manufacture of these systems ourselves could have a material adverse effect on our revenues, profitability, cash flows, and relationships with our customers.

In addition, certain of the components and sub-assemblies included in our products are obtained from a single source or a limited group of suppliers. Our inability to develop alternative sources, if necessary, could result in a prolonged interruption in supply or a significant increase in the price of one or more components, which could adversely affect our operating results.

Our sales to HB LED and data storage manufacturers are highly dependent on these manufacturers' sales for consumer electronics applications, which can experience significant volatility due to seasonal and other factors, which could materially adversely impact our future results of operations.

The demand for HB LEDs and hard disk drives is highly dependent on sales of consumer electronics, such as flat-panel televisions and computer monitors, computers, tablets, digital video recorders, camcorders, MP3\4 players, smartphones, cell phones and other mobile devices. Manufacturers of HB LEDs and hard disk drives are among our largest customers and have accounted

for a substantial portion of our revenues for the past several years. Factors that could influence the levels of spending on consumer electronic products include consumer confidence, access to credit, volatility in fuel and other energy costs, conditions in the residential real estate and mortgage markets, labor and healthcare costs and other macroeconomic factors affecting consumer spending behavior. These and other economic factors have had and could continue to have a material adverse effect on the demand for our customers' products and, in turn, on our customers' demand for our products and services and on our financial condition and results of operations. Furthermore, manufacturers of HB LEDs have in the past overestimated their potential market share growth. If this growth is currently overestimated or is overestimated in the future, we may experience further cancellations of orders in backlog, rescheduling of customer deliveries, obsolete inventory and/or liabilities to our suppliers for products no longer needed.

In addition, the demand for some of our customers' products can be even more volatile and unpredictable due to the possibility of competing technologies, such as flash memory as an alternative to hard disk drives. Should flash memory become cost competitive it may result in a rapid shift in demand from the hard disk drives made by our customers to alternative storage technologies. Unpredictable fluctuations in demand for our customers' products or rapid shifts in demand from our customers' products to alternative technologies could materially adversely impact our future results of operations.

We are exposed to the risks of operating a global business, including the need to obtain export licenses for certain of our shipments and political risks in the countries we operate.

Approximately 90% of our 2011 net sales, 90% of our 2010 net sales and 79% of our 2009 net sales were generated from sales outside of the United States. We expect sales from non-U.S. markets to continue to represent a significant, and possibly increasing, portion of our sales in the future. Our non-U.S. sales and operations are subject to risks inherent in conducting business abroad, many of which are outside our control, including:

- difficulties in managing a global enterprise, including staffing, managing distributors and representatives, and repatriation of earnings,
- regional economic downturns, varying foreign government support, and unstable political environments,
- political and social attitudes, laws, rules, regulations and policies within countries that favor domestic companies over non-domestic companies, including government-supported efforts to promote the development and growth of local competitors,
- longer sales cycles and difficulty in collecting accounts receivable,
- multiple, conflicting, and changing governmental laws and regulations, including import/export controls and other trade barriers,
- reliance on various information systems and information technology to conduct our business, which may be vulnerable to cyber attacks by third parties or breached due to employee error, misuse or other causes that could result in business disruptions, loss of or damage to intellectual property, transaction errors, processing inefficiencies, or other adverse consequences should our security practices and procedures prove ineffective, and
- different customs and ways of doing business.

These challenges, many of which are associated with sales into China, may continue and recur again in the future, which could have a material adverse effect on our business. In addition, political instability, terrorism, acts of war or epidemics in regions where we operate may adversely affect or disrupt our business and results of operations.

Furthermore, products which are either manufactured in the United States or based on U.S. technology are subject to the United States Export Administration Regulations ("EAR") when exported to and re-exported from international jurisdictions, in addition to the local jurisdiction's export regulations applicable to individual shipments. Currently, our MOCVD deposition systems and certain of our other products are controlled for export under the EAR. Licenses or proper license exceptions may be required for the shipment of our products to certain countries. For example, shipment of our MOCVD systems to China and certain other countries generally requires a U.S. export license. Obtaining an export license requires cooperation from the customer and customer-facility readiness, and can add time to the order fulfillment process. While we have generally been very successful in obtaining export licenses in a timely manner, there can be no assurance that this will continue or that an export license can be obtained in each instance where it is required. If an export license is required but cannot be obtained, then we will not be permitted to export the product to the customer. The administrative processing, potential delay and risk of ultimately not obtaining an export license pose a particular disadvantage to us relative to our non-U.S. competitors who are not required to comply with U.S. export controls. Non-compliance with the EAR or other applicable export regulations could result in a wide range of penalties including the denial of export privileges, fines, criminal penalties, and the seizure of commodities. In the event that any export regulatory body determines that any of our shipments violate applicable export regulations, we could be fined significant sums and/or our export capabilities could be restricted, which could have a material adverse impact on our business.

The timing of our orders, shipments, and revenue recognition may cause our quarterly operating results to fluctuate significantly.

We derive a substantial portion of our net sales in any fiscal period from the sale of a relatively small number of high-priced systems. As a result, the timing of recognition of revenue for a single transaction could have a material effect on our sales and operating results for a particular fiscal period. As is typical in our industry, orders, shipments, and customer acceptances often occur during the last few weeks of a quarter. As a result, delay of only a week or two can often shift the related booking or sale into the next quarter, which could adversely affect our reported results for the prior quarter. Our quarterly results have fluctuated significantly in the past, and we expect this trend to continue. If our orders, shipments, net sales or operating results in a particular quarter do not meet expectations, our stock price may be adversely affected.

We operate in industries characterized by rapid technological change.

All of our businesses are subject to rapid technological change. Our ability to remain competitive depends on our ability to enhance existing products and develop and manufacture new products 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, we must anticipate the future demand for products in selecting which development programs to fund and pursue. Our financial results for 2012 and in the future will depend to a great extent on the successful introduction of several new products, many of which require achieving increasingly stringent technical specifications. We cannot be certain that we will be successful in selecting, developing, manufacturing and marketing new products or new technologies or in enhancing existing products.

We face significant competition.

We face significant competition throughout the world in each of our reportable segments, which may increase as certain markets in which we operate continue to expand. Some of our competitors have greater financial, engineering, manufacturing, and marketing resources than us. In addition, we face competition from smaller emerging equipment companies whose strategy is to provide a portion of the products and services we offer, with a focused approach on innovative technology for specialized markets. New product introductions or enhancements by our competitors could cause a decline in sales or loss of market acceptance of our existing products. Increased competitive pressure could also lead to intensified price competition resulting in lower margins. Our failure to compete successfully with these other companies would seriously harm our business.

We depend on a limited number of customers, located primarily in a limited number of regions, that operate in highly concentrated industries.

Our customer base is and has been highly concentrated. Orders from a relatively limited number of customers have accounted for, and likely will continue to account for, a substantial portion of our net sales, which may lead customers to demand pricing and other terms less favorable to us. Based on net sales, our five largest customers accounted for 41%, 55% and 52% of our total net sales in 2011, 2010 and 2009, respectively. Recent customer consolidation activity involving some of our largest customers, particularly in our Data Storage segment, may result in an even greater concentration of our sales in the future.

If a principal customer discontinues its relationship with us or suffers economic setbacks, our business, financial condition, and operating results could be materially and adversely affected. Our ability to increase sales in the future will depend in part upon our ability to obtain orders from new customers. We cannot be certain that we will be able to do so. In addition, because a relatively small number of large manufacturers, many of whom are our customers, dominate the industries in which they operate, it may be especially difficult for us to replace these customers if we lose their business. A substantial portion of orders in our backlog are orders from our principal customers.

In addition, a substantial investment is required by customers to install 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, if a customer selects a competitor's product over ours for technical superiority or other reasons, we could experience difficulty selling to that customer for a significant period of time.

Furthermore, we do not have long-term contracts with our customers. As a result, our agreements with our customers do not provide any assurance of future sales and we are exposed to competitive price pressure on each new order we attempt to obtain. Our failure to obtain new sales orders from new or existing customers would have a negative impact on our results of operations.

Our customer base is also highly concentrated in terms of geography, and the majority of our sales are to customers located in a limited number of countries. In 2011, 75% of our total net sales were to customers located in China, Taiwan and Korea alone. Dependence upon sales emanating from a limited number of regions increases our risk of exposure to local difficulties and challenges, such as those associated with regional economic downturns, political instability, fluctuating currency exchange rates, natural disasters, social unrest, pandemics, terrorism or acts of war. In addition, we may encounter challenges associated with political and social attitudes, laws, rules, regulations and policies within these countries that favor domestic companies over non-domestic companies, including customer- or government-supported efforts to promote the development and growth of local competitors. Our reliance upon customer demand arising primarily from a limited number of countries could materially adversely impact our future results of operations.

Our sales cycle is long and unpredictable.

Historically, we have experienced long and unpredictable sales cycles (the period between our initial contact with a potential customer and the time when we recognize revenue from that customer). Our sales cycle can range up to twelve months or longer. The timing of an order often depends on the capital expenditure budget cycle of our customers, which is completely out of our control. In addition, the time it takes us to build a product to customer specifications (the "build cycle") typically ranges from one to six months, followed in certain cases by a period of customer acceptance during which the customer evaluates the performance of the system and may potentially reject the system. As a result of the build cycle and evaluation periods, the period between a customer's initial purchase decision and

revenue recognition on an order often varies widely, and variations in length of this period can cause further fluctuations in our operating results. As a result of our lengthy sales cycle, we may incur significant research and development expenses and selling and general and administrative expenses before we generate the related revenues for these products. We may never generate the anticipated revenues if a customer cancels or changes plans. Variations in the length of our sales cycle could also cause our net sales and, therefore, our cash flow and net income to fluctuate widely from period to period.

Our inability to attract, retain, and motivate key employees could have a material adverse effect on our business.

Our success depends upon our ability to attract, retain, and motivate key employees, including those in executive, managerial, engineering and marketing positions, as well as highly skilled and qualified technical personnel and personnel to implement and monitor our financial and managerial controls and reporting systems. Attracting, retaining, and motivating such qualified personnel may be difficult due to challenging industry conditions, competition for such personnel by other technology companies, consolidations and relocations of operations and workforce reductions. While we have entered into Employment Agreements with certain key personnel, our inability to attract, retain, and motivate key personnel could have a material adverse effect on our business, financial condition or operating results.

The price of our common shares may be volatile and could decline significantly.

The stock market in general and the market for technology stocks in particular, has experienced volatility that has often been unrelated to the operating performance of companies. If these market or industry-based fluctuations continue, the trading price of our common shares could decline significantly independent of our actual operating performance, and shareholders could lose all or a substantial part of their investment. The market price of our common shares could fluctuate significantly in response to several factors, including among others:

- general stock market conditions and uncertainty, such as those occasioned by a global liquidity crisis, negative financial news, and a failure of large financial institutions;
- receipt of substantial orders or cancellations for our products;
- actual or anticipated variations in our results of operations;
- announcements of financial developments or technological innovations;
- our failure to meet the performance estimates of investment research analysts;
- changes in recommendations and/or financial estimates by investment research analysts;
- strategic transactions, such as acquisitions, divestitures or spin-offs; and
- the occurrence of major catastrophic events.

Significant price and value fluctuations have occurred with respect to the publicly traded securities of the Company and technology companies generally. The price of our common shares is likely to be volatile in the future. In the past, securities class action litigation often has been brought against a company following periods of volatility in the market price of its securities. If similar litigation were pursued against us, it could result in substantial costs and a diversion of management's attention and resources, which could materially and adversely affect our results of operations, financial condition and liquidity.

We are subject to foreign currency exchange risks.

We are exposed to foreign currency exchange rate risks that are inherent in our anticipated sales, sales commitments and assets and liabilities that are denominated in currencies other than the United States dollar. Although we attempt to mitigate our exposure to fluctuations in currency exchange rates, hedging activities may not always be available or adequate to eliminate, or even mitigate, the impact of our exchange rate exposure. Failure to sufficiently hedge or otherwise manage foreign currency risks properly could materially and adversely affect our revenues and gross margins.

The enforcement and protection of our intellectual property rights may be expensive and could divert our limited resources.

Our success depends in part upon the protection of our intellectual property rights. We rely primarily on patent, copyright, trademark and trade secret laws, as well as nondisclosure and confidentiality agreements and other methods, to protect our proprietary information, technologies and processes. We own various United States and international patents and have additional pending patent applications relating to certain of our products and technologies. The process of seeking patent protection is lengthy and expensive, and we cannot be certain that pending or future applications will actually result in issued patents or that issued patents will be of sufficient scope or strength to provide meaningful protection or commercial advantage. In addition, our intellectual property rights may be circumvented, invalidated or rendered obsolete by the rapid pace of technological change. Policing unauthorized use of our products and technologies is difficult and time consuming. Furthermore, the laws of other countries may less effectively protect our proprietary rights than U.S. laws. Our outsourcing strategy requires that we share certain portions of our technology with our outsourcing partners, which poses additional risks of infringement and trade secret misappropriation. Infringement of our rights by a third party, possibly for purposes of developing and selling competing products, could result in uncompensated lost market and revenue opportunities. Similar exposure could result in the event that former employees seek to compete with us, through their unauthorized use of our intellectual property and proprietary information. We cannot be certain that the steps we have taken will prevent the misappropriation or unauthorized use of our proprietary information and technologies, particularly in foreign countries where the laws may not protect our proprietary intellectual property rights as fully or as readily as United States laws. Further, we cannot be certain that the laws and policies of any country, including the United States, with respect to intellectual property enforcement or licensing will not be changed in a way detrimental to the sale or use of our products or technology.

We may need to litigate to enforce our intellectual property rights, protect our trade secrets or determine the validity and scope of proprietary rights of others. As a result of any such litigation, we could lose our ability to enforce one or more patents or incur substantial unexpected operating costs. Any action we take to enforce our intellectual property rights could be costly and could absorb significant management time and attention, which, in turn, could negatively impact our operating results. In addition, failure to protect our trademark rights could impair our brand identity.

We may be subject to claims of intellectual property infringement by others.

From time to time we have received communications from other parties asserting the existence of patent or other rights which they believe cover certain of our products. We also periodically receive notice from customers who believe that we are required to indemnify them for damages they may incur related to infringement claims made against these customers by third parties. Our customary practice is to evaluate such assertions and to consider the available alternatives, including whether to seek a license, if appropriate. However, we cannot ensure that licenses can be obtained or, if obtained, will be on acceptable terms or that costly litigation or other administrative proceedings will not occur. If we are not able to resolve a claim, negotiate a settlement of the matter, obtain necessary licenses on

commercially reasonable terms, and/or successfully prosecute or defend our position, our business, financial condition, and results of operations could be materially and adversely affected.

Our acquisition strategy subjects us to risks associated with evaluating and pursuing these opportunities and integrating these businesses.

We have considered numerous acquisition opportunities and completed several significant acquisitions in the past. We may consider acquisitions of, or investments in, other businesses in the future. Acquisitions involve numerous risks, many of which are unpredictable and beyond our control, including:

- difficulties and increased costs in integrating the personnel, operations, technologies and products of acquired companies;
- diversion of management's attention while evaluating, pursuing, and integrating the business to be acquired;
- potential loss of key employees of acquired companies, especially if a relocation or change in responsibilities is involved;
- difficulties in managing geographically dispersed operations in a cost-effective manner;
- lack of synergy or inability to realize expected synergies;
- unknown, underestimated and/or undisclosed commitments or liabilities;
- increased amortization expense relating to intangible assets; and
- the potential impairment and write-down of amounts capitalized as intangible assets and goodwill as part of the acquisition, as a result of technological advancements or worse-than-expected performance by the acquired company.

Our inability to effectively manage these risks could materially and adversely affect our business, financial condition, and operating results.

In addition, if we issue equity securities to pay for an acquisition, the ownership percentage of our then-existing shareholders would be reduced and the value of the shares held by these shareholders could be diluted, which could adversely affect the price of our stock. If we use cash to pay for an acquisition, the payment could significantly reduce the cash that would be available to fund our operations or other purposes.

We may be required to take additional impairment charges for goodwill and indefinite-lived intangible assets or definite-lived intangible and long-lived assets.

We are required to assess goodwill and indefinite-lived intangible assets annually for impairment, or on an interim basis whenever certain events occur or circumstances change, such as an adverse change in business climate or a decline in the overall industry, that would more likely than not reduce the fair value of a repor