

FSI INTERNATIONAL INC  
Form 10-K  
November 04, 2011

# SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

## Form 10-K

(Mark One)

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

For the fiscal year ended August 27, 2011

or

☐ 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 0-17276

## FSI INTERNATIONAL, INC.

(Exact name of Registrant as specified in its charter)

MINNESOTA  
(State or other jurisdiction of

incorporation or organization)

3455 LYMAN BOULEVARD, CHASKA, MINNESOTA 55318-3052

41-1223238  
(I.R.S. Employer

Identification No.)

(Address of principal executive offices and Zip Code)

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Registrant's telephone number, including area code:

(952) 448-5440

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

Title of each class

Common Stock, no par value

Name of Exchange on which registered:

NASDAQ Global Market

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

Indicate by a check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act of 1933. Yes ☐ No ☒

Indicate by a check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934. Yes ☐ No ☒

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by a checkmark whether the Registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§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 ☐ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405) is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

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 definitions of "accelerated filer," "large accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Securities Exchange Act of 1934.

Large accelerated filer ☐ Accelerated filer ☒

Non-accelerated filer ☐ Smaller reporting company ☐

Indicate by a check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act of 1934). Yes ☐ No ☒

The aggregate market value of the voting common stock held by non-affiliates of the Registrant, based on the closing price on February 25, 2011, the last business day of the Registrant's most recently completed second fiscal quarter, as reported on the NASDAQ Global Market, was approximately \$152,763,000. Shares of common stock held by each officer and director have been excluded from this computation in that such persons may be deemed to be affiliates. This amount is provided only for purposes of this report on Form 10-K and does not represent an admission by the Registrant or any such person as to the status of such person.

As of October 28, 2011, the Registrant had issued and outstanding 38,861,000 shares of common stock.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the Registrant's definitive proxy statement for the Annual Meeting of Shareholders to be held on January 18, 2012 and to be filed within 120 days after the Registrant's fiscal year ended August 27, 2011, are incorporated by reference into Part III of this Form 10-K Report. (The Audit and Finance Committee Report and the Compensation Committee Report included in the Registrant's proxy statement are expressly not incorporated by reference herein.)

## PART I

### Cautionary Information Regarding Forward-Looking Statements

Certain statements contained in this report on Form 10-K constitute forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and are subject to the safe harbor created by that statute. Typically we identify forward-looking statements by use of an asterisk \* . In some cases, you can identify forward-looking statements by terminology such as expects, anticipates, intends, may, should, plans, believes, seeks, estimates, could, would or the negative of such terms or other comparable terminology. Forward-looking statements are based upon current expectations and beliefs and involve numerous risks and uncertainties, both known and unknown, that could cause actual events or results to differ materially from these forward-looking statements. For a discussion of factors that could cause actual results to differ materially from those described in this Form 10-K, see the discussion of risk factors set forth below in Item 1.A. of this report. Although we believe that the expectations reflected in the forward-looking statements are reasonable as of the date of this report, we cannot guarantee future results, levels of activity, performance or achievements. We undertake no duty to update any of the forward-looking statements after the date of this report.

The Gartner Reports described in this document (the Gartner Reports ) represent data, research opinions or viewpoints published, as part of a syndicated subscription service, by Gartner, Inc. ( Gartner ), a leading semiconductor equipment industry group, and are not representations of fact. Each Gartner Report speaks as of its original publication date (and not as of the date of this document) and the opinions expressed in the Gartner Reports are subject to change without notice.

## ITEM 1. BUSINESS

### The Company

FSI International, Inc., a Minnesota corporation organized in 1973 ( FSI , the Company , we , us ), designs, manufactures, markets and supports equipment used in the fabrication of microelectronics, such as advanced semiconductor devices. In fiscal 2011, we provided surface conditioning technology solutions and microlithography systems and support services to worldwide manufacturers of integrated circuits. FSI manufactures, markets and supports surface conditioning equipment that uses wet, cryogenic and other chemistry techniques to clean, strip or etch the surfaces of silicon wafers and supplies refurbished microlithography products that are used to deposit and develop light sensitive films. FSI's business is supported by service groups that provide finance, human resources, information services, sales and service, marketing and other administrative functions.

FSI directly sells and services its products in North America, Europe, and the Asia Pacific region, except for Japan. In Japan, FSI products are sold and serviced through Apprecia Technology, Inc. ( Apprecia ), a company in which FSI maintains a 20 percent equity ownership.

### Industry Background

The complex process of fabricating semiconductor devices involves several distinct phases that are repeated numerous times. Because each production phase typically requires different processing technologies and equipment, no single semiconductor equipment supplier currently produces all types of tools needed to equip an entire state-of-the-art fabrication facility. Instead, semiconductor device manufacturers typically equip their facilities by combining manufacturing equipment produced by a number of suppliers. Each set of equipment performs specific functions in the manufacturing process.

Generally, increasing demand for computer chips, new computer chip designs, new materials of fabrication and new substrate (the underlying material upon which a semiconductor device or integrated circuit is formed) types both size and composition drives demand for new microelectronics manufacturing equipment and

processes. For example, the industry has shifted towards single wafer processes from batch processes. Industries that use microelectronics increasingly demand higher performance devices from manufacturers. Over the last decade, device manufacturers have reduced the feature size and substantially increased the functionality of individual devices through a number of technological advances.

Our business depends upon the microelectronics manufacturers' capital equipment expenditures. Manufacturers' expenditures in turn depend on the current and anticipated market demand for products that use microelectronic devices. The microelectronics industry is cyclical in nature and experiences periodic downturns. Microelectronics manufacturers require equipment suppliers to take an increasingly active role in meeting the manufacturers' technology development and capital productivity requirements. Equipment suppliers satisfy this requirement by developing and supporting products and processes required to address the new trends in microelectronics manufacturing. These trends include development of smaller geometries, transition to new materials, migration to larger wafers and wafer level packaging (the technology of packaging an integrated circuit at wafer level).

As estimated by Gartner in September 2011, purchases of semiconductor equipment by microelectronics manufacturers totaled \$32 billion in calendar 2010. Based upon the Gartner forecast in September 2011, spending on semiconductor equipment is expected to increase by 9% to \$35 billion in calendar 2011 and decline by 20% from calendar 2011 to \$28 billion in calendar 2012.\*

## Products

The sales mix between system sales and spare parts and service sales has varied from year to year. The following table sets forth, for the periods indicated, the amount of revenues and approximate percentages of our total revenues for systems and spare parts and service:

	August 27, 2011		Fiscal Year Ended August 28, 2010		August 29, 2009	
			(Dollars in thousands)			
Systems	\$ 70,326	72.6%	\$ 63,557	69.9%	\$ 32,879	65.1%
Spare parts and service	26,554	27.4%	27,428	30.1%	17,605	34.9%
	\$ 96,880	100.0%	\$ 90,985	100.0%	\$ 50,484	100.0%

## Systems

FSI surface conditioning ( SC ) systems perform etching and cleaning operations for:

front-end-of-line ( FEOL ) fabrication steps, where integrated circuits or transistors are formed in and on the substrate during the manufacturing process;

back-end-of-line ( BEOL ) fabrication steps, where metal wiring levels are formed on the surface of the wafer and are connected to the transistors; and

wafer-level packaging surface preparation, including cleaning, etching and stripping functions necessary to fabricate solder bumps or other terminal structures needed to connect the chip to the circuit board.

Today's most advanced integrated circuit ( IC ) manufacturing involves more than 100 surface preparation steps. Many factors are considered when designing and optimizing a surface preparation process to meet a particular application need. These factors can include:

cleaning and etching goals, which are related to the removal of wafer contaminants and films;

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selectivity goals, which are related to leaving desired films and structures intact; and

manufacturing goals, which are related to cost, productivity, safety and environmental concerns.

The priority of each factor in determining the final surface preparation process can vary widely across the more than 100 different steps and depends on the contaminants that need to be removed, the materials that need to be preserved on the wafer surface, the dimensions of patterned features and overall process integration. These varied requirements and priorities indicate that no single surface preparation technology can provide the optimal process for every surface preparation requirement. FSI offers a range of technologies that allow us, with our customers, to select and optimize the best solution for each step. These technologies include batch and single wafer spray, batch immersion and single wafer cryogenic aerosol.

***Batch Spray Processing Systems.*** Our batch spray processing systems, which include the ZETA® and MERCURY® Spray Cleaning Systems, are sophisticated SC systems that remove unwanted films and contaminants from the surface of semiconductor wafers at various stages in the microelectronic device fabrication process. Multiple cassettes that contain up to 27 wafers each are placed onto a turntable inside the system's process chamber. As the turntable rotates, dispense ports apply a chemical spray to the wafers' surfaces to dissolve and remove the undesirable films and contaminants. After chemical application, ultra pure water is sprayed on the wafer surfaces to rinse away the chemicals. Multiple chemical and rinse steps may be employed depending on the customer's specific application. The process sequence is completed with a drying step where a flow of nitrogen into the chamber dries the wafers and the chamber. Our control system and chemical mixing manifold allow the user to define, control and monitor a variety of chemical mixtures, temperatures and sequences. This enables the user to rapidly develop new processes and utilize the systems for multiple applications.

Our batch spray systems achieve state-of-the-art performance and are well suited for applications that require removal of high levels of contamination, such as implanted photoresist and unreacted silicide metal. Through efficient mixing and use of chemicals and water packaged in a small product footprint, customers may realize lower operational costs using our batch spray systems than with competing systems. ZETA® Systems are differentiated from our competition in that they dispense fresh chemicals during wafer processing as compared to wet bench systems that may use recirculated chemicals. Fresh chemical dispense leads to the lowest possible surface contamination levels, which is critical in the fabrication of advanced devices.

The ZETA® System is a fully-automated batch spray processor currently available in configurations for both 200 and 300mm wafers. The ZETA® System's advanced process controls, process capability and automation are ideal for leading technology nodes, particularly from 90 nanometers ( 90 nm ) to 32nm and below. Our ZETA® products provide a reliable, automated environment to move wafers to and from the process chamber. This tool's multi-chemical flow system allows for a wide range of chemical blend ratios. The system is also available in a lower cost semi-automated configuration capable of processing 150 or 200mm wafers.

Offered on ZETA® and ORION® Systems, our ViPR® technology provides the industry with an all-wet non-ashing implanted resist strip process. Ashing is a method of stripping photoresist using an excited gas such as oxygen plasma, ozone or hydrogen-containing plasma. Ashing can cause surface damage and undesired material loss. ViPR® provides a non-ashing alternative stripping methodology by raising the process chemistry temperature and reactivity higher than the traditional processes. The ViPR® process is accomplished through FSI's patented steam injection chemistry.

In 2008, ViPR® technology was expanded to include stripping of unreacted metals for metal silicide process steps, most notably the nickel platinum silicide process which traditionally used hazardous aqua regia chemistry. Aqua regia (a mixture of nitric acid and hydrochloric acid) is also known to attack nickel platinum silicide degrading 45 and 32nm device performance. ViPR® has demonstrated its ability to efficiently strip the unreacted metals without attacking the silicide layer.

The MERCURY® System is a semi-automated batch spray processor designed for wafer sizes up to 200mm in diameter and process technologies through the 90nm node. The system has been widely adopted by the IC manufacturing industry, with nearly 1,000 systems shipped to customers since its introduction in 1989. MERCURY® Systems provide the benefits of high performance cleaning, etching and stripping with the added advantage of low capital cost and low cost of ownership and a small footprint.

**Single Wafer Cleaning Systems.** Our newest platform, the ORION® Single Wafer Cleaning System, is for cleaning 300mm semiconductor wafers in a closed chamber, single wafer environment. The ORION® platform uses FSI's core technologies, including ViPR® technology, in-line chemical blending, energetic aerosol chemical and water delivery, recipe driven process flexibility and closed chamber environmental control. Its small footprint modular design has the flexibility to enable clustering of different chamber types and the extendibility to add modules to increase maximum throughput. In addition to offering a highly productive and space efficient cleaning solution, the system's unique closed chamber permits control of the environment in which the wafer is processed. Benefits include elimination of water marks, reduction of oxidation and related material loss, prevention of galvanic corrosion of metal film stacks, and the use of our proprietary ViPR® technology to strip implanted photoresist and salicide metal residues.

Since its introduction in 2008, ORION® Systems have proven their ability to enable BEOL copper / low-k interconnect cleans and have been accepted for 45nm, 32nm and 28nm manufacturing. ORION® Systems are also currently being used in 22nm development activities.

**CryoKinetic Processing Systems.** Our ANTARES® CryoKinetic Cleaning System is a fully automated, single wafer cleaning platform designed for 200 and 300mm wafers. CryoKinetic cleaning is a physical energy transfer process used to remove non-chemically bonded particles from the surface of a microelectronic device. These systems offer a field-proven history of removing surface particle defects and improving customer yields. The ANTARES® System uses an all-dry non-chemically reactive method for removing defects from all surface types from the beginning to the end of the device manufacturing process. Of particular benefit to our customers is its inherent compatibility with new device materials and smaller device features.

CryoKinetic cleaning technology allows our customers to insert particle removal steps in the manufacturing line where previous or traditional wet cleaning and scrubber methods have been phased out due to their incompatibility with new materials and their propensity to cause watermark residue and surface charge defects. Implementing the CryoKinetic clean technology allows our customers to recover yield that would normally be lost where traditional approaches cannot be used, such as after in-line electrical testing of wafers. In-line testing creates debris on the wafer surface that cannot be removed with traditional cleaning methods due to the sensitivity of the exposed materials (copper and low-k dielectrics). The ANTARES® System can eliminate defects created by in-line electrical probing so IC makers can collect electrical test data without scrapping wafers.

We believe the technical capabilities of the ANTARES® System extend beyond current technology nodes and may result in increased customer acceptance due to the limitations of wet scrubbing methods.\*

**Immersion Processing Systems.** Immersion cleaning systems are used to clean silicon wafers by immersing wafers in multiple tanks filled with process chemicals. These systems enable the implementation of high performance isopropyl alcohol (IPA) assisted drying to meet the critical cleaning requirements for 90, 65, and 45nm technology nodes. Our MAGELLAN® Immersion Cleaning System is a fully automated immersion cleaning product designed for either 200 or 300mm wafers at advanced technology nodes and is capable of multiple cleans, including critical clean, resist strip and etch. We believe this system compares favorably to competing systems through its process performance, flexibility, extendibility, and rapid cycle time in a footprint that is smaller than the leading competition when configured for specific applications. The MAGELLAN® Immersion Cleaning System incorporates a portfolio of exclusive intellectual property, including our Surface Tension Gradient (STG®) rinse/dry technology, SymFlow® etch technology, ozone oxide re-growth technology, and narrow-gate-compatible MegaLens® Acoustic Diffuser megasonic cleaning technology. The MAGELLAN® System is qualified for several processes including FEOL critical clean, FEOL photoresist strip and post-ash clean, as well as oxide etch and nitride etch.

**Resist Processing Systems.** Our POLARIS® Microlithography System is used to deposit polyimide resist and photoresist, light-sensitive, etch-resistant materials used to transfer an image to the surface of a silicon wafer, or similar material wafer, and then bake, chill and develop the deposited material after exposure. We are focused



on providing cost effective solutions to our existing base of POLARIS® System customers and for specialized markets, including wafer level packaging, micro-electromechanical systems, and thin film media storage devices. Through our POLARIS® Refresh Program, in which customers can purchase pre-owned, certified POLARIS® clusters (an integrated environmentally isolated manufacturing system consisting of process, transport, and cassette modules mechanically linked together) made of both new and/or re-manufactured modules. This allows customers to add capacity for a lower capital investment. The ratio of new to pre-owned modules is based on customer expectations and the availability of used modules. These systems are able to accommodate a variety of processes and can be purchased in a new configuration or a system can be reconfigured and upgraded to match previously installed configurations.

### **Spare Parts and Service**

We offer system and subsystem upgrade packages, spare part kits, individual spare part components, robot refurbishment and replacement, and support services that provide product and process enhancements to extend the life of previously purchased and installed systems. Our customer service and process engineers assist and train customers worldwide to perform preventive maintenance on, and to service, our equipment. In addition, our process engineering groups develop process applications to expand the capabilities of our equipment. These upgrade and spare part packages and support service programs enable our worldwide customers to realize a higher return on their capital investment. We sell a variety of process, service and maintenance programs. A number of customers have purchased maintenance contracts in which our service employees work at the customer's facility to provide process, service and maintenance support for our equipment.

### **Backlog and Seasonality**

Our backlog consists of customer purchase orders with delivery dates within the next 12 months. Our backlog was \$18.0 million at fiscal 2011 year-end and \$16.0 million at fiscal 2010 year-end. Approximately 61% of our backlog at fiscal 2011 year-end was comprised of orders from two customers. Approximately 46% of our backlog at fiscal 2010 year-end was comprised of orders from two other customers. All orders are subject to cancellation by the customer and in some cases a penalty provision could apply to a cancellation.

In fiscal 2011 and 2010, no significant purchase orders were canceled. Because of the timing and relative size of certain orders we receive and possible changes in delivery schedules and order cancellations, our backlog can vary from time to time so that backlog as of any particular date is not necessarily indicative of actual sales for any subsequent period. Our business is cyclical but is not seasonal to any significant extent.

### **Research and Development**

We believe that our future success depends in large part on our ability to enhance and advance, in collaboration with our customers and other equipment and materials manufacturers, our existing SC product lines to meet the changing needs of microelectronics manufacturers. We believe that industry trends, such as the use of smaller circuit geometries, the increased use of larger substrates and manufacturers' increased desire for integrated processing equipment, will make highly automated and integrated systems, including single substrate processing systems, more important to customers. For assistance in our development efforts, we maintain relationships with our customers and industry consortium, who help identify and analyze industry trends and assess how our development activities meet the industry's advanced technology needs.

Our current research and development programs are focused on creating new processes and technologies for cleaning substrates without damaging the smaller patterned features being used for the most advanced IC devices. We are also conducting programs to increase process control and flexibility through monitoring and software management systems and process automation, robotics automation in the cleanroom, and integration of our product offerings with other suppliers' products. Each of these programs involves collaboration with customers and other equipment manufacturers to ensure proper machine configuration and process development to meet industry requirements.

We maintain an 8,000-square-foot, state-of-the-art demonstration and process development laboratory for our SC business at our Chaska, Minnesota facility. In addition, we lease 6,000 square feet of laboratory and office space in Allen, Texas for demonstration of our POLARIS resist processing products.

Expenditures for research and development, which are expensed as incurred, during fiscal 2011 were approximately \$12.8 million, representing 13.2% of total sales. Expenditures for research and development during fiscal 2010 were approximately \$12.7 million, representing 14.0% of total sales, and expenditures for research and development during fiscal 2009 were approximately \$14.7 million, representing 29.1% of total sales.

We expect to continue to make substantial investments in research and development.\* We also recognize the importance of managing product transitions successfully, as the introduction of new products could adversely affect sales of existing products.

### **Marketing, Sales and Support**

We market our products worldwide to manufacturers of microelectronic devices. Our marketing and sales efforts are focused on building long-term collaborative relationships with our customers. These efforts are supported by marketing, sales, and service personnel, along with applications engineers. Our worldwide teams work collaboratively with individual IC manufacturers, in FSI process laboratories and at customer sites, to integrate FSI developed products and process innovations into customer process flows and optimize them according to customer priorities.

During fiscal 2011, we directly sold and serviced our products in North America, Europe and the Asia Pacific region, and through Apprecia in Japan.

By providing a full portfolio of direct support services, we are able to develop stronger relationships with our customers who continue to show greater interest in expanding beyond their current use of our traditional spray cleaning technologies to include new FEOL and BEOL applications for batch and single wafer spray, as well as employing our advanced immersion and CryoKinetic technologies. Our improved and extensive regional support contributes to the continued success with foundry and memory device producers resulting in FSI products being used in advanced 45nm, 32nm and 28nm production, as well as 22nm and 14nm development activity.

### **Manufacturing, Raw Materials and Suppliers**

We maintain manufacturing facilities in Chaska, Minnesota and Allen, Texas. We typically assemble our products and systems from components and prefabricated parts manufactured and supplied by others, including process controllers, robots, integrated circuits, power supplies, stainless steel pressure vessels, chamber bowls, valves and relays. Certain items manufactured by third parties are custom-made to our specifications. Typically, final assembly and systems tests are performed by our manufacturing personnel. Quality control is maintained through quality assurance programs with suppliers, incoming inspection of components, in-process inspection during equipment assembly, and final inspection and operation of manufactured equipment prior to shipment. We have a company-wide quality program in place, utilizing many of the key processes developed when we received ISO 9001 certification in 1994, ISO 9000:2000 certification in 2003 and ISO 14001:2004 certification in 2003 (which certifications expired in November 2008 with respect to ISO 9001 and ISO 9000:2000, and April 2009 with respect to ISO 14001:2004, when we decided to stop paying the required maintenance fee).

Certain components and subassemblies included in our products are obtained from a single supplier or a limited group of suppliers to ensure overall quality and delivery timeliness. We purchased approximately 20% of our fiscal 2011, approximately 23% of our fiscal 2010 and approximately 25% of our fiscal 2009 inventory purchases from two suppliers. Although we seek to reduce dependence on sole and limited-source suppliers, disruption or termination of certain of our inventory sources could have a temporary adverse effect on our operations. We believe that alternative sources could be obtained and qualified to supply these products, if

necessary, but that production delays would likely occur in some cases.\* Further, a prolonged inability to obtain certain components could have an adverse effect on our operating results, delay scheduled deliveries and damage our customer relationships.\*

## Competition

The semiconductor equipment industry is very competitive and marked by continuous technological challenges. Each of our products competes in markets defined by the particular IC fabrication process it performs. Significant competitive factors in the equipment market include system price, which encompasses total cost of ownership, quality, process performance, reliability, flexibility, extendibility, process or tool of record, and customer support.

We believe that once a device manufacturer has selected a particular supplier's capital equipment, the manufacturer generally relies upon that equipment for the specific production line application and, to the extent possible, subsequent generations of similar products. Accordingly, it is difficult to achieve significant sales to a particular customer once another supplier's capital equipment has been selected.

Many of our established competitors have greater financial, engineering, research, development, manufacturing, marketing, service and support resources. To remain competitive, we must invest in research and development, marketing, customer service and support programs, and also manage our operating expenses. We cannot ensure that we will have sufficient resources to continue to make these investments or that our products will continue to be viewed as competitive as a result of technological advances by existing or new competitors or due to changes in semiconductor technology.

Our products compete with, among others, the products of DaiNippon Screen Manufacturing Co. Ltd., Lam Research, SEMES Co., Applied Materials, Inc., Tokyo Electron Ltd. and several smaller companies. In addition, we compete with various small equipment refurbishment, equipment maintenance and spare parts providers.

## Customers

We sell products from one or more of our product lines to most major microelectronics manufacturers. We have an extensive history of sales to several of the largest IC manufacturers and over 100 active customers worldwide. The following customers each accounted for 10% or more of our total sales in one or more of fiscal 2011, 2010 and 2009:

Customer	Fiscal 2011	Fiscal 2010	Fiscal 2009
Samsung Electronics	27%	32%	34%
Global Foundries	18%	i	i
Hynix Semiconductor, Inc.	i	11%	i

i Customer accounted for less than 10% of our total sales during the fiscal year.

The loss of any of these customers could have a material adverse effect on our operations. We have experienced, and expect to continue to experience, fluctuations in our customer mix.\* The timing of an order for our equipment is primarily dependent upon the customer's expansion program, replacement needs, or requirements to improve productivity and yields. Consequently, a customer who places significant orders in one year will not necessarily place significant orders in subsequent years.

Under the distribution agreement entered into on May 15, 2007 with Apprecia, Apprecia has exclusive distribution rights for five years with respect to our SC products in Japan. Prior to its expiration, the distribution agreement with Apprecia may be terminated only upon the occurrence of certain events or conditions or as otherwise mutually agreed. Starting in fiscal 2009, Apprecia was subject to a minimum purchase obligation.

Apprecia did not achieve the minimum purchase obligation in fiscal 2011, 2010 or 2009, and therefore, we have the right to terminate the agreement in accordance with its terms and conditions. We are not currently electing to terminate the agreement; however, we may elect to do so in the future if subsequent purchase obligations are not met.

### **Patents, Trademarks and Intellectual Property**

Our success depends upon a variety of factors, including proprietary technology. It is important to protect our technology by obtaining and enforcing patents. Consequently, we have an active program to file patent applications in the United States and other countries on inventions we consider significant. We also possess other proprietary intellectual property, including trademarks, know-how, trade secrets and copyrights. We also protect our proprietary information through confidentiality agreements with our employees and various third parties.

We have a number of patents in the United States and other countries, with additional applications pending. These patents may be challenged, invalidated or circumvented, or may not provide any competitive advantages to us. Pending applications may not result in patents and the claims allowed in future patents may not be sufficiently broad to protect our technology. The laws of some foreign countries may not permit the protection of our proprietary rights to the same extent as under the laws of the United States. We believe that the protections afforded by our patents, patent applications, and other intellectual property rights have value. Because of rapidly changing technology, our future success depends on the know-how of our employees.

In the normal course of business, we occasionally receive and make inquiries about possible patent infringement. In dealing with such inquiries, it may be necessary or useful for us to obtain or grant licenses or other rights. However, we cannot ensure that such license rights will be available to us on commercially reasonable terms, or even at all. The inability to obtain certain license or other rights, or to obtain such licenses or rights on favorable terms, or the need to engage in litigation could have a material adverse effect on our business.

We offer our POLARIS® System pursuant to a non-exclusive license from Texas Instruments Incorporated ( TI ). We have converted the license to a fully-paid, worldwide license to sell and manufacture the POLARIS® System. We also have the non-exclusive right to manufacture and sell related TI modules. The license agreement with TI continues until terminated by either party upon a breach by the other, and the failure to cure, in accordance with the terms of the agreement.

We offer our ANTARES® CX Cleaning System under license agreements from IBM Corporation. The licenses require certain minimum and system-based royalties. Royalties are based on the royalty portion revenues of licensed equipment that excludes amounts for freight, taxes, customers' duties, insurance, discounts, and certain equipment not manufactured by us.

As of August 27, 2011, we had 60 U.S. patents. Expiration dates for these patents range from September 2012 to March 2028.

### **Employees**

As of August 27, 2011, we had 354 full and part-time employees. Competition for highly skilled employees is intense. We believe that our future success depends upon our continued ability to retain and attract qualified employees. We are not subject to any collective bargaining agreements in the United States and have never been subject to a work stoppage. We are subject to collective bargaining agreements in Italy and France covering 11 employees. We have never been subject to a work stoppage in Italy or France.

### **Environmental Matters**

We implemented an enterprise-wide program to actively engage our employees to develop ways to, and emphasize the importance of, protecting the environment in everyday life at FSI. Our programs include recycling, water use reductions, chemical handling processes and equipment design for the environment.

We are subject to a variety of governmental regulations related to the discharge or disposal of toxic, volatile or otherwise hazardous chemicals used in the manufacturing and product development process. We believe that we are in compliance with these regulations and that we have obtained all necessary environmental permits to conduct our business. These permits generally relate to the disposal of hazardous wastes. If we fail to comply with present or future regulations, fines could be imposed, production and product development could be suspended, or operations could cease. Such regulations could require us to acquire significant equipment or take other actions necessary to comply with environmental regulations at a potentially significant cost. If we fail to control the use of, or adequately restrict the discharge and disposal of, hazardous substances, we could incur future liabilities.

We believe that compliance with federal, state and local provisions regulating the discharge of materials into the environment, or otherwise relating to the protection of the environment, will not have a material effect upon our capital expenditures, earnings or competitive position in the foreseeable future.\*

### **International Sales**

International sales accounted for approximately 58% of total sales in fiscal 2011, 64% of total sales in fiscal 2010, and 71% of total sales in fiscal 2009. Additional information on our international sales for each of the last three fiscal years is disclosed in Note 12 of the Notes to Consolidated Financial Statements included in Item 8 of this report.

### **Available Information**

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act of 1934 are available free of charge on our website at [www.fsi-intl.com](http://www.fsi-intl.com) as soon as reasonably practicable after such reports have been filed with or furnished to the Securities and Exchange Commission ( SEC ). The public may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549, on official business days during the hours of 10:00 am to 3:00 pm. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site, <http://www.sec.gov>, that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

### **Item 1A. Risk Factors**

Our business faces significant risks. The risks described below are not the only risks we face. Additional risks and uncertainties not presently known to us or that we currently believe are immaterial also may impair our business operations. If any of the events or circumstances described in the following risks occurs, our business, operating results or financial condition could be materially adversely affected. The following risk factors should be read in conjunction with the other information and risks set forth in this report.

#### **Volatility in the global economy could adversely affect our business and operating results.**

Financial markets in the United States, Europe and Asia have experienced extreme disruption in the past, including, among other things, volatility in securities prices, severely diminished liquidity and credit availability, rating downgrades of certain investments and declining valuation of others, declines in consumer confidence, declines in economic growth, increases in unemployment rates, and uncertainty about economic stability. These conditions have had a significant adverse impact on our industry and financial condition and results of operations. Further changes in the global economy could lead to challenges in our business and negatively impact our financial condition and results of operations. A tightening of credit in financial markets adversely affects the ability of our customers and suppliers to obtain financing for significant purchases and operations and could result in a decrease in orders and spending for our products and services. We are unable to predict the likely

duration and severity of any disruption in financial markets and adverse economic conditions and the effects they may have on our business and financial condition. Uncertain economic conditions could materially and adversely affect our business, financial condition and results of operations.

**Because our business depends on the amount that manufacturers of microelectronics spend on capital equipment, downturns in the microelectronics industry may adversely affect our business and operating results.**

The microelectronics industry experiences periodic downturns, which may have a negative effect on our business and our sales and other operating results. Our business depends on the amounts that manufacturers of microelectronics spend on capital equipment. The amounts they spend on capital equipment depend on the existing and expected demand for semiconductor devices and products that use semiconductor devices. When a downturn occurs, some semiconductor manufacturers experience lower demand and increased pricing pressure for their products. As a result, they are likely to purchase less semiconductor processing equipment and have sometimes delayed making decisions to purchase capital equipment. In some cases, semiconductor manufacturers have canceled or delayed orders for our products. Historically, the semiconductor equipment industry has experienced more pronounced decreases in net sales than the semiconductor industry as a whole. We have in the past experienced downturns in orders for new equipment as well as delays in or cancellations of existing orders. We cannot predict the extent and length of any future downturns in the industry.

**We have, and expect to continue to have, significant working capital needs.**

We have and expect to continue to have substantial capital expenditure and working capital needs. We do not have any revolving line of credit or other form of debt financing. In the future, if more cash is needed to fund operations than expected, we encounter unanticipated problems or expenses in our business, or we decide to make an investment in, or acquire, businesses, products or technologies, we may need to take additional cash-generating actions. Such actions may include the establishment of a financing facility or the sale of equity or debt securities. Depending on market conditions, it could be difficult for us to raise the additional cash needed without incurring significant dilution to our existing shareholders or agreeing to significant restrictions on our ability to operate as currently planned.

**Our actual results may vary from the guidance we provide investors, which could cause our stock price to decline and subject us to lawsuits from investors.**

We may provide earnings guidance from time to time. For a variety of reasons, our results of operations are difficult to predict and may vary significantly from quarter to quarter. Our ability to achieve forecasted results depends on a number of factors, including our assumptions regarding future performance, many of which are entirely outside of our control. Due to the uncertainties relating to assumptions that management makes in calculating our expected financial results, actual results may vary from the guidance we provide investors and may vary materially. Investors are cautioned not to place undue reliance on our earnings guidance. In addition, because we provide earnings guidance from time to time, our common stock may be subject to increased volatility and we may be subject to lawsuits by investors. Our stock price may decline following an announcement of disappointing earnings or earnings guidance or if we revise our earnings guidance downward as the estimates and assumptions we make in calculating guidance become more certain. Also, some companies that have made downward revisions to their earnings guidance or did not meet the guidance provided have been subject to lawsuits by investors. Such lawsuits may have merit and result in adverse settlements or judgments. Even if such lawsuits are dismissed or have no merit, they may be costly and may divert management's attention and other resources away from our business, which could harm our business and the price of our common stock.

**We have incurred significant net losses in the past, our future revenues are inherently unpredictable, and we may be unable to maintain profitability.**

We have incurred significant net losses in the past. Our operating results for future periods are subject to numerous uncertainties, and we cannot assure that we will be able to maintain profitability. It is possible that in future quarters our operating results will decrease from the previous quarter or fall below the expectations of securities analysts and investors. In this event, the trading price of our common stock could significantly decline. Further, exacerbated or continuing declines in net income or increases in net losses could affect our operating results, liquidity or financial condition.

**Because we derive a significant percentage of our quarterly revenues from bookings received during the quarter and from shipments made in the final weeks of the quarter, our quarterly revenues are difficult to predict.**

We derive a significant percentage of our quarterly revenues from bookings received during the quarter and from shipments made in the final weeks of the quarter, making quarterly revenues difficult to predict. We generate a significant percentage of our quarterly revenues from orders received during the quarter and turned for shipment within the quarter. Any shortfall in expected turns orders will adversely affect quarterly revenues. There are many factors that can cause a shortfall in turns orders, including declines in general economic conditions or the businesses of our customers. In addition, we sometimes book a disproportionately large percentage of turns orders during the final weeks of the quarter. Any failure to receive, or delay in receiving, expected turns orders would adversely (and perhaps materially) affect quarterly revenues. We sometimes ship a disproportionately large percentage of our quarterly revenues during the final weeks of the quarter, and any delays in making those shipments could result in such revenue being recognized in the following quarter. Any failure to effect scheduled shipments by the end of a quarter would adversely affect quarterly revenues.

**We derive our revenues primarily from a relatively small number of high-priced systems, sales of which significantly affect our quarterly operating results.**

System sales constitute a significant portion of our total revenue. Our systems are priced from approximately \$500,000 to up to \$5 million per unit, and our revenues in any given quarter are dependent upon a rather limited number of sales of such systems. As a result, the inability to recognize revenue on even a few systems can cause a significant adverse impact on our revenues for that quarter.

**We have a limited number of key customers, which may subject us to unpredictable revenue swings.**

Sales to a limited number of large customers constitute a significant portion of our new orders, overall revenue and profitability. As a result, the actions of even one customer may subject us to revenue swings that are difficult to predict. Similarly, significant portions of our credit risk may, at any given time, be concentrated among a limited number of customers, so that the failure of even one of these key customers to pay its obligations to us could significantly impact our cash flow and operating results.

**Failure of our products to gain market acceptance would adversely affect our business, operating results and financial condition.**

We believe that our growth prospects depend upon our ability to gain customer acceptance of our products and technology, particularly newly developed products, such as our ORION® Single Wafer Cleaning System. Market acceptance of products depends upon numerous factors, including:

compatibility with existing manufacturing processes and products;

ability to displace incumbent suppliers;

perceived advantages over competing products; and

the level of customer service available to support such products.

Moreover, manufacturers often rely on a limited number of equipment vendors to meet their manufacturing equipment needs. As a result, market acceptance of our products may be affected adversely to the extent potential customers utilize a competitor's manufacturing equipment. There can be no assurance that sales of new products will remain constant or grow or that we will be successful in obtaining broad market acceptance of our systems and technology.

We expect to spend a significant amount of time and resources to develop new systems and enhance existing systems. In light of the long product development cycles inherent in our industry, we will make these expenditures well in advance of the prospect of deriving revenue from the sale of any new systems. Our ability to commercially introduce and successfully market any new systems is subject to a wide variety of challenges during this development cycle, including start-up bugs, design defects and other matters that could delay introduction of these systems to the marketplace. In addition, since our customers are not obligated by long-term contracts to purchase our systems, our anticipated product orders may not materialize or orders that do materialize may be canceled. As a result, if we do not achieve market acceptance of new products, we may not be able to realize sufficient sales of our systems in order to recoup research and development expenditures. The failure of any of our new products, including the ORION®, to achieve market acceptance would harm our business, operating results and financial condition.

**If we do not continue to develop new products and processes, we will not be able to compete effectively.**

Our business and results of operations could decline if we do not develop and successfully introduce new or improved products and processes that the market accepts. The technology used in microelectronics manufacturing equipment and processes changes rapidly. For example, the industry has shifted towards single wafer processes from batch processes. Industry standards change constantly and equipment manufacturers frequently introduce new products and processes. We believe that microelectronics manufacturers increasingly rely on equipment manufacturers like us to:

design and develop more efficient manufacturing equipment;

design and implement improved processes for use by microelectronics manufacturers; and

make their equipment compatible with equipment made by other equipment manufacturers.

To compete, we must continue to develop, manufacture, and market new or improved products and processes that meet changing industry standards. To do this successfully, we must:

select appropriate products;

design and develop our products efficiently and quickly;

implement our manufacturing and assembly processes efficiently and on time;

make products that perform well for our customers;

market and sell our products effectively; and

introduce our new products in a way that does not unexpectedly reduce sales of our existing products.

**Because we do not have long-term sales commitments with our customers, our operating results will be adversely affected if customers decide to reduce, delay or cancel orders or choose to buy from our competitors.**



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We depend and expect to continue to depend on a limited number of customers for a large portion of our business, and if our significant customers reduce, delay, or cancel orders, then our operating results could suffer. Our largest customers have changed from year to year, however, sales to our top five customers accounted for approximately 64% of total revenues in fiscal 2011, 63% of total revenues in fiscal 2010 and 55% of total revenues in fiscal 2009. Samsung Electronics accounted for approximately 27% of our revenues in fiscal 2011,

32% of our total revenues in fiscal 2010 and approximately 34% of our total revenues in fiscal 2009. Global Foundries accounted for approximately 18% of our total revenues in fiscal 2011. Hynix accounted for approximately 11% of our total revenues in fiscal 2010. We currently have no long-term sales commitments with any of our customers. Instead, we generally make sales under purchase orders. All orders are subject to cancellation or delay by the customer.

**Our licensing practices related to international spare parts sales may subject us to fines and could reduce our ability to be competitive in certain countries.**

In addition to offering our customers microelectronics manufacturing equipment, we provide replacement spare parts, spare part kits and assemblies. In late calendar 2006, we determined that certain of our replacement valves, pumps and heaters could fall within the scope of United States export licensing regulations to products that could be used in connection with chemical weapons processes. We determined that these regulations require us to obtain licenses to ship some of our replacement spare parts, spare part kits and assemblies to customers in certain controlled countries as defined in the export licensing regulations. During the second quarter of fiscal 2007, we were granted licenses to ship replacement spare parts, spare parts kits and assemblies to all customers in the controlled countries where we were conducting business.

The applicable export licensing regulations frequently change. Moreover, the types and categories of products that are subject to export licensing are often described in the regulations in general terms and could be subject to differing interpretations. If we do not maintain the appropriate export licenses, our business and results of operations could be adversely affected and we could be subjected to significant fines.

In the second quarter of fiscal 2007, we made a voluntary disclosure to the United States Department of Commerce to clarify our licensing practices and to review our practices with respect to prior sales of certain replacement valves, pumps and heaters to customers in several controlled countries.

In October 2009, we entered into a settlement agreement with the Office of Export Enforcement for \$450,000. We paid \$5,000 per month for ten months beginning in November 2009. The remaining \$400,000 owed under the settlement was suspended for 12 months. The 12-month suspension period expired on October 29, 2010. We believe that we have maintained compliance with all export laws during the suspension period and do not anticipate any additional payments.

**Product or process development problems could harm our results of operations.**

Our products are complex, and from time to time have defects or bugs that are difficult and costly to fix. This can harm our results of operations in the following ways:

we may incur substantial costs to ensure the functionality and reliability of products early in their life cycle;

repeated defects or bugs can reduce orders, increase manufacturing costs, adversely impact working capital and increase service and warranty expenses;

we may require significant lead times between product introduction and commercialization;

harm our credibility with existing customers; and

lead to commercial and/or product liability as a result of lawsuits.

As a result, we may have to write off inventory and other assets related to products and could lose customers and revenue. There is no assurance that we will be successful in preventing product and process development problems that could potentially harm our results of operations.

**If the worsening of credit market conditions continues or increases, it could have a material adverse impact on our investment portfolio.**

The short-term funding credit issues that began during the second half of calendar 2007 continue to impact liquidity in asset-backed commercial paper and to cause failed auctions in the auction rate securities market. If the global credit market continues to deteriorate, our investment portfolio may be impacted and we could determine that some of our investments are impaired. This could materially adversely impact our results of operations and financial condition.

Our investment portfolio includes auction rate securities ( ARS ). The ARS we currently hold have contractual maturities between 31 to 32 years. ARS are usually found in the form of municipal bonds, preferred stock, a pool of student loans or collateralized debt obligations. The interest rates of our ARS are reset every 28 days through an auction process and at the end of each reset period, investors can sell or continue to hold the securities at par.

The \$2.0 million par value ARS we hold are backed by student loans and are collateralized, insured and guaranteed by the United States Federal Department of Education. In addition, all ARS held by us are rated by the major independent rating agencies, carry investment grade ratings and have not experienced any payment defaults.

Beginning in the second quarter of fiscal 2008, all of our ARS experienced failed auctions due to sell orders exceeding buy orders. Under the contractual terms, the issuer is obligated to pay penalty interest rates should an auction fail. We cannot liquidate our ARS until a successful auction occurs, the issuer redeems the ARS, a buyer is found outside of the auction process or the underlying securities have matured.

There is no assurance that future auctions of our ARS will be successful. As a result, our ability to voluntarily liquidate and recover the carrying value of some or all of the ARS we hold may be limited for an indefinite period of time. If an issuer of our ARS is unable to successfully close future auctions or does not redeem the ARS, or the United States government fails to support its guaranty of the obligations, we may be required to adjust the carrying value of the ARS and record impairment charges in future periods, which could materially affect our results of operations and financial condition.

**Changes in demand caused by fluctuations in foreign currency exchange rates may reduce our international sales.**

Almost all of our direct international sales are denominated in U.S. dollars. Nonetheless, changes in demand caused by fluctuations in interest and currency exchange rates may affect our international sales. We have direct sales, service and applications support and logistics responsibilities for our products in Europe and the Asia Pacific region, and accordingly, we incur labor, service and other expenses in foreign currencies. As of August 27, 2011, we had not entered into any hedging activities and our foreign currency transaction gains and losses for fiscal 2011 were insignificant. We periodically evaluate various hedging activities and other options to minimize fluctuations in foreign currency exchange rates. There is no assurance that we will be successful in minimizing foreign exchange rate risks and such failure may reduce our international sales or negatively impact our operating results.

**Because of the need to meet and comply with numerous foreign regulations and policies, the potential for change in the political and economic environments in foreign jurisdictions and the difficulty of managing business overseas, we may not be able to sustain our historical level of international sales.**

We operate in a global market. In fiscal 2011, approximately 58% of our sales revenue derived from sales outside of the United States. In fiscal 2010, approximately 64% of our sales revenue derived from sales outside the United States. In fiscal 2009, approximately 71% of our sales revenue derived from sales outside the United States. We expect that international sales will continue to represent a significant portion of total sales.\* Sales to customers outside the United States involve a number of risks, including the following:

imposition of government controls;

compliance with U.S. export laws and foreign laws;

political and economic instability;

trade restrictions;

changes in taxes and tariffs;

longer payment cycles;

difficulty of administering business overseas; and

general economic conditions.

In particular, the Japanese and Asia Pacific markets are extremely competitive. The semiconductor device manufacturers located in these markets are very aggressive in seeking price concessions from suppliers, including equipment manufacturers like us.

We seek to meet technical standards imposed by foreign regulatory bodies. However, we cannot guarantee that we will be able to comply with those standards in the future. Any failure by us to design products to comply with foreign standards could have a significant negative impact on us.

**Because of the significant financial resources needed to offer a broad range of products, to maintain customer service and support and to invest in research and development, we may be unable to compete with larger, better established competitors.**

The microelectronics equipment industry is highly competitive. We face substantial competition throughout the world. We believe that to remain competitive, we will need significant financial resources to offer a broad range of products, to maintain customer service and support, and to invest in research and development. We believe that the microelectronics industry is becoming increasingly dominated by large manufacturers who have the resources to support customers on a worldwide basis. In the past several years, we have seen a trend toward consolidation in the microelectronics equipment industry. We expect the trend toward consolidation to continue as companies seek to strengthen or maintain their market positions in a rapidly changing industry.\* This could lead to larger, stronger competitors. Some of our competitors have substantially greater financial, marketing, and customer-support capabilities than us. Large equipment manufacturers have or may enter the market areas in which we compete. In addition, smaller, emerging microelectronics equipment companies provide innovative technology. We expect that our competitors will continue to improve the design and performance of their existing products and processes. We also expect them to introduce new products and processes with better performance and pricing than their existing products and processes. We cannot guarantee that we will continue to compete effectively in the United States or elsewhere. We may be unable to continue to invest in marketing, research and development and engineering at the levels we believe necessary to maintain our competitive position. Our failure to make these investments could have a significant negative impact on our business, operating results and financial condition.



**Manufacturing interruptions or delays could affect our ability to meet customer demand, while the failure to estimate customer demand accurately could result in excess or obsolete inventory.**

Our business depends on our ability to supply equipment, services and related products that meet the rapidly changing requirements of our customers, which depends in part on the timely delivery of parts, components and subassemblies (collectively, parts) from suppliers. Some key parts may be subject to long lead-times and/or obtainable only from a single supplier or limited group of suppliers. Significant interruptions of manufacturing operations or the delivery of services could result in delayed deliveries to our customers, manufacturing inefficiencies, increased costs or 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 export approvals;

information technology or infrastructure failures;

difficulties related to planning or effecting business process changes;

natural disasters (such as earthquakes, floods or storms); or

other causes (such as regional economic downturns, pandemics, political instability, terrorism or acts of war).

Moreover, 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. Any or all of these factors could materially and adversely affect our business, financial condition and results of operations.

**Our backlog may not result in future net sales.**

We schedule the production of our systems based in part upon order backlog. Due to possible customer changes in delivery schedules and cancellations of orders, our backlog at any particular date is not necessarily indicative of actual sales for any succeeding period. In addition, while we evaluate each customer order on a case by case basis to determine qualification for inclusion in backlog, there can be no assurance that amounts included in backlog ultimately will result in future sales. A reduction in backlog during any particular period, or the failure of our backlog to result in future sales, could harm our business and operating results.

**Because we depend upon our management and technical personnel for our success, the loss of key personnel could place us at a competitive disadvantage.**

Our success depends to a significant extent upon our management and technical personnel. The loss of a number of these key persons could have a negative effect on our operations. Competition is high for such personnel in our industry in all of our locations. We periodically review our compensation and benefit packages to ensure that they are competitive in the marketplace and make adjustments or implement new programs, as appropriate. We cannot guarantee that we will continue to attract and retain the personnel we require.

**Our employment costs in the short-term are to a large extent fixed, and therefore any unexpected revenue shortfall could adversely affect our operating results.**

Our operating expense levels are based in significant part on our headcount, which generally is driven by longer-term revenue goals. For a variety of reasons, particularly the high cost and disruption of lay offs and the costs of recruiting and training, our headcount in the short-term is, to a large extent, fixed. Accordingly, we may be unable to reduce employment costs in a timely manner to compensate for any unexpected

shortfall in revenue or gross margin, which could have a material adverse effect on our operating results.

**Because the development and protection of our intellectual property is important to our success, the loss or diminution of our intellectual property rights could adversely affect our business.**

We attempt to protect our intellectual property rights through patents, copyrights, trade secrets, and other measures. However, we believe that our financial performance will depend more upon the innovation, technological expertise, and marketing abilities of our employees than on such protection. In connection with developing and protecting our intellectual property rights, we face the following risks:

our pending patent applications may not be issued or may be issued with more narrow claims;

patents issued to us may be challenged, invalidated, or circumvented;

rights granted under issued patents may not provide competitive advantages to us;

foreign laws may not protect our intellectual property rights; and

others may independently develop similar products, duplicate our products, or design around our patents.

We occasionally receive notices from others alleging infringement claims, and we also consider seeking claims against others. We have been involved in patent infringement litigation in the past and we could become involved in similar lawsuits or other patent infringement claims in the future. We cannot guarantee the outcome of such lawsuits or claims, which may have a significant negative effect on our business or operating results.

**We are exposed to various risks related to legal proceedings or claims.**

We have in the past and may in the future be involved in legal proceedings or claims regarding patent infringement, intellectual property rights, contracts and other matters. These legal proceedings and claims, whether with or without merit, could be time-consuming and expensive to prosecute or defend, and could divert management's attention and resources. There can be no assurance regarding the outcome of future legal proceedings or claims. 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 its position, our business, financial condition and results of operations could be materially and adversely affected.

There has and continues to be substantial litigation regarding patent and other intellectual property rights in the microelectronics industry. Commercialization of new products or further commercialization of our products could provoke claims of infringement by third parties. In the future, litigation may be necessary to enforce patents issued to us, to protect trade secrets or know-how owned by us or to defend us against claimed infringement of the rights of others and to determine the scope and validity of our proprietary rights. Any such litigation could result in substantial costs and diversion of our effort, which alone could have a material adverse impact on our financial condition and operating results. Further, adverse determinations in such litigation could result in our loss of proprietary rights, subject us to significant liabilities to third parties, require us to seek licenses from third parties or prevent us from manufacturing or selling one or more products, any of which could have a material adverse effect on our financial condition and results of operations.

We generate minor amounts of liquid and solid hazardous waste and use licensed haulers and disposal facilities to ship and dispose of such waste. In the past, we have received notice from state or federal enforcement agencies that we are a potentially responsible party ( PRP ) in connection with the investigations of several hazardous waste disposal sites owned and operated by third parties. In each matter, we have elected to participate in settlement offers made to all *de minimis* parties with respect to such sites. The risk of being named a PRP is that if any of the other PRPs are unable to contribute their proportionate share of the liability, if any, associated with the site, those PRPs that are financially capable could be held financially responsible for the shortfall.

Certain of our product lines are intended for use with hazardous chemicals. As a result, we are notified by our customers from time to time of incidents involving our equipment that have resulted in a spill or release of a hazardous chemical. We maintain product liability insurance in an effort to minimize our risk. However, in some





cases it may be alleged that we or our equipment are at fault. There can be no assurance that any future litigation resulting from such claims would not have a material adverse effect on our business or financial results.

**Our sales cycle is long and unpredictable, which could require us to incur high sales and marketing expenses with no assurance that a sale will result.**

Sales cycles for some of our products can run as long as 12 to 18 months. As a result, we may not recognize revenue from efforts to sell particular products for extended periods of time. We believe that the length of the sales cycle may increase as some current and potential customers centralize purchasing decisions into one decision-making entity.\* We expect this may intensify the evaluation process and require us to make additional sales and marketing expenditures with no assurance that a sale will result.

**We may raise additional capital in the future through the issuance of equity securities, which may result in dilution to existing shareholders.**

In order to expand our business, we may consider offering and issuing additional equity or equity-based securities. Holders of our securities may experience a dilution in the net tangible book value per share held by them and a reduction in their percentage of ownership if this occurs.

**Future acquisitions may dilute our shareholders' ownership interests and have other adverse consequences.**

Because of consolidations in the semiconductor equipment industry we serve and other competitive factors, our management may seek to acquire additional product lines, technologies, and businesses if suitable opportunities develop. Acquisitions may result in the issuance of our stock, which may dilute our shareholders' ownership interests and reduce earnings per share. Acquisitions also may increase debt levels and the related goodwill and other intangible assets, which could have a significant negative effect on our financial condition and operating results. In addition, acquisitions involve numerous risks, including:

difficulties in absorbing the new business, product line, or technology;

diversion of management's attention from other business concerns;

entering new markets in which we have little or no experience; and

possible loss of key employees of the acquired business.

**Because of the volatility of our stock price, the ability to trade shares of our common stock may be adversely affected and our ability to raise capital through future equity financing may be reduced.**

Our stock price has been volatile in the past and may continue to be so in the future. In fiscal 2011, our stock price ranged from \$2.11 to \$5.41 per share. In fiscal 2010, our stock price ranged from \$0.83 to \$5.17 per share and in fiscal 2009, our stock price ranged from \$0.20 to \$1.21 per share.

The trading price of our common shares is subject to wide fluctuations in response to various factors, some of which are beyond our control, including, but not limited to, factors discussed elsewhere in this report, and the following:

failure to meet the published expectations of securities analysts for a given period;

changes in financial estimates by securities analysts;

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press releases or announcements by, or changes in market values of, comparable companies;

additions or departures of key personnel; and

involvement in or adverse results from litigation.

The prices of technology stocks, including ours, have been particularly affected by extreme fluctuations in price and volume in the stock market generally. These broad stock market fluctuations may have a negative effect on our future stock price.

In the past, securities class action litigation has often been brought against a company following periods of volatility in the market price of its securities. In the future we could be the target of this type of litigation. Securities litigation may result in substantial costs and divert management's attention and resources, which could seriously harm our business.

**Our common stock is at risk for delisting from the NASDAQ Global Market. If it is delisted, our stock price and the liquidity of our common stock may be impacted.**

While our stock price has exceeded \$1.00 per share during fiscal 2011, our stock price traded below \$1.00 during fiscal 2010 and 2009. If, in the future, the bid price falls below \$1.00 for 30 consecutive business days, we could receive notice from the NASDAQ Global Market stating that the bid price of our common stock had closed below the minimum \$1.00 per share requirement for continued inclusion on the NASDAQ Global Market under Listing Rule 5450(a)(1). Under NASDAQ Listing Rule 5810(c)(3)(A), we would then have 180 calendar days to regain compliance. If at any time after receiving the notice, the bid price of our common stock closes at \$1.00 per share or more for a minimum of 10 consecutive business days, the NASDAQ Global Market would notify us that we have achieved compliance with the minimum bid price rule. However, if we did not regain compliance with the minimum bid price rule within the 180 calendar days, the NASDAQ Global Market would determine whether we met the initial listing criteria for the NASDAQ Global Market other than the bid price requirement. If we met such criteria, we may be afforded additional time in order to regain compliance with the minimum bid price rule.

If we fail to meet NASDAQ's maintenance criteria, our common stock will be delisted from the NASDAQ Global Market.

If we fail to maintain the standards necessary to be quoted on the NASDAQ Global Market and our common stock is delisted, trading in our common stock may be conducted on the NASDAQ Capital Market or other available market, provided we meet the standards of such market. Our stock price, as well as the liquidity of our common stock, may be adversely impacted as a result.

**Because our quarterly operating results are volatile, our stock price could fluctuate.**

In the past, our operating results have fluctuated from quarter to quarter and are likely to do so in the future. These fluctuations may have a significant impact on our stock price. The reasons for the fluctuations in our operating results, such as sales, gross profits, and net loss, include:

*The Timing of Significant Customer Orders and Customer Spending Patterns.* During industry downturns, our customers may ask us to delay or even cancel the shipment of equipment orders. Delays and cancellations may adversely affect our operating results in any particular quarter if we are unable to recognize revenue for particular sales in the quarter in which we expected those sales.

*The Timing of Customer Acceptances.* Based on our revenue recognition policy, certain shipments to customers are not recognized until customer acceptance. Delays of customer acceptances may adversely affect our operating results in any particular quarter if we are unable to recognize revenue for particular sales in the quarter in which we expected those sales.

*The Timing of New Product and Service Announcements By Us or Our Competitors.* New product announcements by us or our competitors could cause our customers to delay a purchase or to decide to purchase products of one of our competitors which would adversely affect our revenue and, therefore, our results of operations. New product announcements by others may make it necessary for us to reduce prices on our products or offer more service options, which could adversely impact operating margins and net income.

*The Mix of Products Sold and the Market Acceptance of Our New Product Lines.* The mix of products we sell varies from period to period, and because margins vary among or within different product lines, this can adversely affect our results of operations. If we fail to sell products that generate higher margins, our average gross margins may be lower than expected. If we fail to sell our new product lines, our revenue may be lower than expected.

*General Global Economic Conditions or Economic Conditions in a Particular Region.* When economic conditions in a region or worldwide worsen, customers may delay or cancel their orders. There also may be an increase in the time it takes to collect payment from our customers or even outright payment defaults. This can negatively affect our cash flow and our results.

As a result of these factors, our future operating results are difficult to predict. Further, we base our current and future expense plans in significant part on our expectations of our longer-term future revenue. We expect our expense levels to be relatively fixed in the short term. An unanticipated decline in revenue for a particular quarter may disproportionately affect our net income in that quarter. If our revenue is below our projections, then our operating results will also be below expectations. Any one of the factors we list above, or a combination of them, could adversely affect our quarterly results of operations, and consequently may cause a decline in our stock price.

**Our restated articles of incorporation, as amended, our restated by-laws and Minnesota law make a takeover of our company more difficult and expensive, which may prevent certain changes in control and limit the market price of our common stock.**

Our restated articles of incorporation, as amended, our restated by-laws and Section 302A.673 of the Minnesota Business Corporation Act contain provisions that might enable our management to resist a takeover of our company. Provisions in our amended and restated articles of incorporation, as amended, and restated by-laws may discourage, delay or prevent a merger or acquisition involving us that our shareholders may consider favorable. For example, our authorized but unissued shares of common stock and preferred stock are available for future issuances without shareholder approval, subject to any limitations imposed by the NASDAQ Global Market. Our board of directors may set the rights, preferences and terms of new preferred stock, without shareholder approval. With these rights and preferences, it could be more difficult for a third party to acquire us. In addition, our restated articles of incorporation, as amended, provide for a staggered board of directors, with directors serving for three-year terms, with approximately one-third of the directors coming up for re-election each year. Having a staggered board will make it more difficult for a third party to obtain control of our board of directors through a proxy contest, which may be a necessary step in any acquisition of us that is not favored by our board of directors.

**Our management has broad discretion in allocating any net proceeds from the sale of securities.**

We reserve the right to use any funds obtained from the sale of our securities in any manner which our management deems to be in our best interests and in the best interests of our shareholders in order to address changed circumstances or seek out new opportunities. As a result of the foregoing, our success will be substantially dependent upon the discretion and judgment of management with respect to the application and allocation of the net proceeds from any offering of our securities. Investors in any equity securities offered will be entrusting their funds to our management, upon whose judgment and discretion the investors must depend.

**Political events, war, acts of terrorism, public health issues, natural disasters and other circumstances could materially adversely affect the Company.**

War, acts of terrorism, geopolitical uncertainties, public health issues, and other business interruptions have caused and could cause damage or disruption to international commerce and the global economy, and thus could have a negative impact on us, our suppliers, vendors and customers. Our business operations are subject to interruption by natural disasters, fire, power shortages, terrorist attacks, and other hostile acts, labor disputes, public health issues, and other events beyond our control. Such events could decrease demand for our products,

make it difficult or impossible for us to make and deliver products to our customers, or to receive components from our suppliers, and create delays and inefficiencies in our supply chain. Should major public health issues, including pandemics, arise, we could be negatively affected by more stringent employee travel restrictions, additional limitations in freight services, governmental actions limiting the movement of products between regions, delays in production ramps of new products, and disruptions in the operations of our suppliers. In the event of a natural disaster, losses and significant recovery time could be required to resume operations and our financial condition and operating results could be materially adversely affected.

**We do not intend to pay dividends.**

We have never declared or paid any cash dividends on our common stock. We currently intend to retain any future earnings for funding growth and, therefore, do not expect to pay any dividends in the foreseeable future.\*

**Item 1B. Unresolved Staff Comments**

We do not have any unresolved staff comments.

**ITEM 2. PROPERTIES**

We own a 197,000-square-foot facility in Chaska, Minnesota. The facility contains certain product engineering, manufacturing, sales, administrative and support functions. It includes 8,500 square feet of class 1 and class 10 laboratory space; and 40,000 square feet of Class 1,000 and 10,000 cleanroom space; manufacturing support operations and a customer training center.

We currently have a sublease for approximately 8,000 square feet of space in Allen, Texas. The lease expires on August 31, 2012.

We also maintain small leased sales and service offices throughout Europe and Asia near our customer locations.

**ITEM 3. LEGAL PROCEEDINGS**

We are not subject to any material pending legal proceedings.

**ITEM 4. REMOVED AND RESERVED**

**ITEM 4A. EXECUTIVE OFFICERS OF THE COMPANY**

The executive officers are elected by the board of directors, generally for a term of one year, and serve until their successor is elected and qualified. The following table and discussion contains information regarding our current executive officers.

Name	Age	Position
John C. Ely(1)	52	Vice President, Global Sales, Marketing and Service
Patricia M. Hollister(2)	51	Chief Financial Officer and Assistant Secretary
Donald S. Mitchell(3)	56	Chairman and Chief Executive Officer
Benno G. Sand(4)	57	Executive Vice President, Business Development and Investor Relations and Secretary

- (1) John Ely was named Vice President of Global Sales, Marketing and Service in March 2009. He previously served as Executive Vice President of Global Sales and Service from May 2003 to March 2009. Mr. Ely was the Executive Vice President; President, of our SC Division from August 2000 to June 2003. Mr. Ely was the SC Division's Sales/ Marketing/Applications Manager from 1997 to 2000; General Manager from 1995



- to 1997; Product Specialist/Product Manager from 1989 to 1995; and in direct sales from 1985 to 1989. Prior to joining FSI, Mr. Ely was in sales and served as the Western Territory Manager of Galtek, a subsidiary of Entegris, Inc. Mr. Ely is a director of SCD Mountain View, Inc., one of our subsidiaries.
- (2) Patricia Hollister has served as Chief Financial Officer since January 1998 and as Assistant Secretary since January 2000. She was our Corporate Controller from March 1995 to January 1998. Prior to joining FSI, Ms. Hollister was employed by KPMG LLP in Minneapolis, Minnesota where she served for over 12 years on various audit and consulting engagements, most recently as a Senior Manager. Ms. Hollister is a director of various FSI-owned foreign subsidiaries, as well as NVE Corporation.
- (3) Donald Mitchell was named Chief Executive Officer and President of FSI in December 1999, was appointed a director of FSI in March 2000 and became Chairman of the Board of Directors for FSI in January 2002. From its formation in 1998 until December 1999, he was President of Air Products Electronic Chemicals, Inc., a division of Pennsylvania-based Air Products and Chemicals, Inc. From 1991 to 1998, he served as President of Schumacher Corporation, a leading global chemical equipment and services supplier to the semiconductor industry. Throughout his career with Schumacher Corporation, Mr. Mitchell held various executive positions, including Vice President of Operations and Vice President of Sales and Marketing. Mr. Mitchell is a director of FSI. Mr. Mitchell served as the 1999/2000 Chairman of the Board of Directors for Semiconductor Equipment and Materials International, a leading global industry trade association and was a member of the Board until July 2005.
- (4) Benno Sand has served as Executive Vice President, Business Development and Investor Relations since January 2000. He has served as Executive Vice President since January 1992 and Secretary since March 2002. Mr. Sand also served as Chief Administrative Officer from January 1998 to December 1999, as Chief Financial Officer from October 1990 to January 1998, and as Vice President of Finance from October 1987 to January 1992. Mr. Sand is a director of various FSI-owned United States and foreign subsidiaries, as well as Apprecia and Sajan, Inc.

## PART II

### ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is traded on the NASDAQ Global Market<sup>SM</sup> under the symbol **FSII**. The following table sets forth the highest and lowest daily sale prices, as reported by the NASDAQ Global Market for the fiscal periods indicated:

Fiscal Quarter	2011		2010	
	High	Low	High	Low
First	\$ 3.38	\$ 2.22	\$ 2.40	\$ 0.83
Second	4.82	3.25	3.47	1.13
Third	5.41	3.20	4.56	2.31
Fourth	4.76	2.11	5.17	2.65

There were approximately 435 record holders of our common stock on October 31, 2011.

We have never declared or paid cash dividends on our common stock. We currently intend to retain all earnings for use in our business and do not anticipate paying dividends in the foreseeable future.\* Any future determination as to payment of dividends will depend upon our financial condition and results of operations and such other factors as are deemed relevant by our board of directors.



**ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA**

The table that follows presents portions of our consolidated financial statements and are not complete. You should read the following selected consolidated financial data in conjunction with our consolidated financial statements and with Management's Discussion and Analysis of Financial Condition and Results of Operations included elsewhere in this report. The consolidated statement of operations data for the years ended August 27, 2011, August 28, 2010 and August 29, 2009, and the consolidated balance sheet data as of August 27, 2011 and August 28, 2010, are derived from our audited consolidated financial statements, which are included elsewhere in this report. The consolidated statements of operations data for the years ended August 30, 2008 and August 25, 2007 and the consolidated balance sheet data as of August 29, 2009, August 30, 2008 and August 25, 2007 are derived from our audited consolidated financial statements which do not appear in this report.

The historical results presented below are not necessarily indicative of the results to be expected for any future fiscal year or fiscal period.

**Selected Historical Financial Data**

(in thousands, except per share amounts)

	Fiscal Year Ended				
	August 27, 2011 (3)(4)	August 28, 2010 (3)(4)	August 29, 2009 (2)(4)	August 30, 2008 (2)(4)	August 25, 2007 (1)(2)(4)
<b>Consolidated Statements of Operations Data:</b>					
Sales	\$ 96,880	\$ 90,985	\$ 50,484	\$ 78,256	\$ 116,233
Gross margin	40,316	42,918	16,427	32,637	46,880
Selling, general, and administrative expenses	19,277	17,684	19,504	29,027	34,569
Research and development expenses	12,768	12,703	14,674	18,962	24,086
Operating income (loss)	8,271	12,531	(17,751)	(15,352)	(11,775)
Gain on sale of marketable securities/ (impairment of investments)		54	110	(353)	(4,088)
Equity in earnings of affiliates					27
Net income (loss)	\$ 8,323	\$ 13,021	\$ (17,624)	\$ (14,002)	\$ (14,856)
Income (loss) per share basic	\$ 0.22	\$ 0.39	\$ (0.57)	\$ (0.46)	\$ (0.49)
Income (loss) per share diluted	\$ 0.21	\$ 0.39	\$ (0.57)	\$ (0.46)	\$ (0.49)
Weighted average common shares used in per share calculations basic	38,677	33,301	31,129	30,648	30,413
Weighted average common shares used in per share calculations diluted	39,178	33,628	31,129	30,648	30,413
<b>Consolidated Balance Sheets Data:</b>					
Total assets	\$ 115,609	\$ 102,298	\$ 63,685	\$ 87,653	\$ 101,404
Total long-term debt					616
Stockholders' equity	93,521	82,803	50,657	67,658	80,766
Dividends					

- (1) During fiscal 2007, we recorded an impairment and loss on sale of investment of \$4.1 million related to transactions with Apprecia.
- (2) During fiscal 2009, we recorded severance and outplacement costs of \$604,000 to cost of goods sold, \$1,133,000 to selling, general and administrative expense and \$875,000 to research and development expense. During fiscal 2008, we recorded severance and outplacement costs of \$142,000 to cost of goods sold, \$1,314,000 to selling, general and administrative expense and \$536,000 to research and development expense. During fiscal 2007, we recorded severance and outplacement costs of \$296,000 to cost of goods sold, \$923,000 to selling, general and administrative expense and \$592,000 to research and development expense. See Note 15 of the Notes to Consolidated Financial Statements for a discussion of the fiscal 2009 severance and outplacement costs.

- (3) During fiscal 2011, we recorded discretionary compensation of \$77,000 to cost of goods sold, \$341,000 to selling, general and administrative expense and \$132,000 to research and development expense. During fiscal 2010, we recorded discretionary compensation of \$375,000 to cost of goods sold, \$1,250,000 to selling, general and administrative expense and \$875,000 to research and development expense.
- (4) During fiscal 2011, we recorded an immaterial adjustment to beginning accumulated deficit and accumulated other comprehensive loss as of August 30, 2008 for certain intercompany accounting errors for periods through August 30, 2008. We corrected the remaining intercompany accounting errors related to fiscal 2010 and 2009 in fiscal 2011. See Note 1 of the Notes to Consolidated Financial Statements.

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**ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**  
**Application of Critical Accounting Policies and Estimates**

In accordance with SEC guidance, those material accounting policies that we believe are the most critical to an investor's understanding of our financial results and condition and require complex management judgment are discussed below.

Our critical accounting policies and estimates are as follows:

revenue recognition;

valuation of long-lived assets;

estimation of valuation allowances and accrued liabilities, specifically product warranty, inventory provisions and allowance for doubtful accounts;

stock-based compensation; and

income taxes.

*Revenue Recognition*

We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the purchase price is fixed or determinable and collectibility is reasonably assured. If our sales to existing customers involve equipment that has been demonstrated to meet product specifications prior to shipment, we account for the product sales as a multiple element arrangement. Revenue from multiple element arrangements is allocated among the separate accounting units based on the relative selling price of each deliverable. We recognize the equipment revenue upon shipment and transfer of title. The other multiple elements include installation, service contracts and training. Equipment installation revenue is valued based on estimated service person hours to complete installation and quoted service labor rates and is recognized when the installation has been completed and the equipment has been accepted by the customer. Service contract revenue is determined based on estimated service person hours to complete the service and published or quoted service labor rates and is recognized over the contract period. Training revenue is determined based on quoted training class prices and is recognized when the customers complete the training classes or when a customer-specific training period has expired. The quoted service labor rates and training class prices are rates actually charged and billed to our customers.

All other product sales with customer-specific acceptance provisions are recognized upon customer acceptance. Future revenues may be negatively impacted if we are unable to meet customer-specific acceptance criteria. Revenue related to spare part sales is recognized upon shipment or delivery based on the title transfer terms. Revenues related to maintenance and service contracts are recognized ratably over the duration of such contracts.

The timing and amount of revenue recognized depends on whether revenue is recognized upon shipment versus acceptance. For revenue recognized upon acceptance, it is dependent upon when customer-specific criteria are met.

*Valuation of Long-Lived Assets*

We assess the impairment of long-lived assets whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An asset or asset group is considered impaired if its carrying amount exceeds the undiscounted future net cash flow the asset or asset group is expected to generate. If an asset or asset group is considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the asset exceeds its fair value. If estimated fair value is less than the book value, the asset is written down to the estimated fair value and an impairment loss is recognized.



If we determine that the carrying amount of long-lived assets may not be recoverable, we measure any impairment based on the fair value of the long-lived assets. Net long-lived assets amounted to \$14.8 million as of August 27, 2011.

In fiscal 2011, we generated net income of \$8.3 million. We did not generate positive cash flows from operations, primarily due to investments in inventory. If our long-term future plans do not yield positive cash flows in excess of the carrying amount of our long-lived assets, we may incur future impairments of those assets.\*

Considerable management judgment is necessary in estimating future cash flows and other factors affecting the valuation of long-lived assets, and the operating and macroeconomic factors that may affect them. We use historical financial information, internal plans and projections and industry information in making such estimates.

#### *Product Warranty*

We record a liability for warranty claims at the time of sale. The amount of the liability is based on the trend in the historical ratio of claims to sales, new product sales and other factors. The warranty periods for new equipment manufactured by us generally ranges from six months to two years. Special warranty provisions are also accrued for major rework campaigns. Although management believes the likelihood to be relatively low, claims experience could be materially different from actual results because of the introduction of new, more complex products; competition or other external forces; manufacturing changes that could impact product quality; or as of yet unrecognized defects in products sold.

Warranty provisions and claims for the fiscal years ended August 27, 2011, August 28, 2010, and August 29, 2009 were as follows (in thousands):

	August 27, 2011	August 28, 2010	August 29, 2009
Beginning balance	\$ 1,127	\$ 1,702	\$ 2,757
Warranty provisions	2,116	775	450
Warranty claims	(1,755)	(870)	(1,460)
Change in estimate	663	(480)	(45)
Ending balance	\$ 2,151	\$ 1,127	\$ 1,702

During fiscal 2011, we increased the accrual for changes in estimates by \$663,000 due to increased claims experience. During fiscal 2010, we reversed \$480,000 of unused prior period warranty accruals associated with improved claims experience.

#### *Inventory Provisions*

We record provisions for inventory shrinkage and for potentially excess, obsolete and slow moving inventory. The amounts of these provisions are based upon historical loss trends, inventory levels, physical inventory and cycle count adjustments, expected product lives, forecasted sales demand and recoverability. Results could be materially different if demand for our products decreases because of economic or competitive conditions, length of the industry downturn, or if products become obsolete because of technical advancements in the industry or by us. In fiscal 2011 and fiscal 2010, we recorded approximately \$2.0 million and \$2.5 million, respectively, of additional inventory reserves associated primarily with engineering design changes. In fiscal 2011, we also scrapped approximately \$3.4 million of obsolete inventory.

*Allowance for Doubtful Accounts*

Management must make estimates of the uncollectibility of accounts receivable. The most significant risk is the risk of sudden unexpected deterioration in the financial condition of a significant customer who is not considered in the allowance. Management specifically analyzes accounts receivable and analyzes historical bad debts, customer concentrations, customer credit-worthiness, current economic trends and changes in our customer payment terms when evaluating the adequacy of the allowance for doubtful accounts. Results could be materially impacted if the financial condition of a significant customer deteriorated and related accounts receivable are deemed uncollectible. Accounts receivable are determined to be past due based on payment terms and are charged off after management determines that they are uncollectible.

A rollforward of the allowance for doubtful accounts for the fiscal years ended August 27, 2011, August 28, 2010 and August 29, 2009 is as follows (in thousands):

	Balance at Beginning of Year	Recoveries	Bad Debt Expense	Write- offs	Balance at End of Year
Fiscal year ended August 27, 2011	\$ 112	\$	\$	\$	\$ 112
Fiscal year ended August 28, 2010	\$ 125	\$ (13)	\$	\$	\$ 112
Fiscal year ended August 29, 2009	\$ 128	\$ (21)	\$ 18	\$	\$ 125

*Stock-Based Compensation*

We recognize compensation expense for all stock options granted under our stock incentive plan and employee stock purchase plan. We recorded stock compensation expense of \$945,000 in fiscal 2011, \$1,444,000 in fiscal 2010 and \$482,000 in fiscal 2009.

We utilize a Black-Scholes option-pricing model to estimate fair value of each award on the date of grant. The Black-Scholes model requires the input of certain assumptions that involve management judgment. Key assumptions that affect the calculation of fair value include the expected life of stock-based awards and our stock price volatility. Additionally, we expense for only those shares expected to vest. The assumptions used in calculating the fair value of stock-based awards and the forfeiture rate of such awards reflect management's best estimates. However, circumstances may change and additional data may become available over time, which could result in changes to these assumptions that materially impact the fair value determination of future awards or their estimated rate of forfeiture. If factors change and we use different assumptions in future periods, the compensation expense recorded may differ significantly from the expense recorded in the current period. See Note 10 of Notes to Consolidated Financial Statements for additional information on stock-based compensation.

*Income Taxes*

Our effective income tax rate is based on income, statutory tax rates and tax planning opportunities available to us in the various jurisdictions in which we operate. We have established valuation allowances against the U.S. and non-U.S. net operating losses to reflect the uncertainty of our ability to fully utilize these benefits given the limited carryforward periods permitted by the various jurisdictions. The evaluation of the realizability of our net operating losses requires the use of considerable management judgment to estimate the future taxable income for the various jurisdictions, for which the ultimate amounts and timing of such estimates may differ. We assessed both positive and negative factors and determined that there was not sufficient evidence at this time to reverse any portion of the valuation allowance. We will continue to evaluate the need to make adjustments to our valuation allowance based on anticipated future operating performance.

Significant judgment is required in determining our unrecognized tax benefits. We have established accruals using management's best judgment and adjust these accruals as warranted by changing facts and circumstances. A change in our tax liabilities in any given period could have a significant impact on our results of operations and cash flows for that period.

## Industry Update

In September, Gartner decreased its calendar year 2011 and 2012 revenue forecasts for the semiconductor and equipment industries from those made in June of 2011. Gartner is now forecasting that semiconductor revenue will be flat in calendar 2011 at \$300 billion (compared to revenue of \$315 billion forecasted in June 2011), and will increase 4.6 percent in calendar 2012 (compared to an 8.6 percent increase forecasted in June 2011) from their re-forecasted amount. Gartner cited an increase in channel inventory, excess foundry and DRAM capacity and uncertainty related to global economic conditions as the reasons for their more cautious view. Memory logic and foundry producers are taking a more cautious approach to future revenue forecasts based on declining device demand, particularly related to personal computer unit demand.

Gartner is also forecasting foundry growth of 4.2 percent in 2011 and 6.1 percent in 2012. The 2011 and 2012 year-over-year increase in foundry revenue is expected to be led by foundry device content for smart phone and tablet products.

In September, Gartner forecasted that wafer fabrication equipment spending is expected to grow approximately 9 percent in calendar 2011 (compared to growth of 12 percent forecasted in June 2011). This forecast is being made despite the capacity investment delays announced by several major device producers. Gartner now expects wafer fabrication equipment spending to decline approximately 20 percent in calendar 2012 (compared to a 3 percent decline forecasted in June 2011) from their 2011 re-forecasted amount. Gartner attributed the decline to foundry overcapacity, inventory correction, slow demand for semiconductors and a decline in device average selling price.

## Overview

Our business depends upon microelectronics manufacturers' capital equipment expenditures. Manufacturers' expenditures in turn depend on the current and anticipated market demand for products that use microelectronic devices. The microelectronics industry is cyclical in nature and experiences periodic downturns. Despite microelectronic industry trends, equipment suppliers like FSI are required to invest in research and development to produce products that enable the next generation device production. Trends in the microelectronics industry require that semiconductor manufacturers work with the supplier in the development of smaller geometries, the transition to new materials, migration to larger wafers and wafer level packaging.

Fiscal 2011 represented a year of transition from batch to single wafer products. This transition has been occurring over several years because of the increased use of larger substrates (300mm), increased use of integrated process equipment and a desire by microelectronics manufacturers to shorten cycle time by processing single wafer lots (primarily for logic and other application-specific devices). In fiscal 2011, over 50 percent of FSI's orders were for our ANTARES<sup>®</sup> and ORION<sup>®</sup> single wafer products, and the single wafer products' percentage contribution to total revenue is expected to increase further in fiscal 2012.\* We expected operating margins would come under pressure as we made the investments required to gain broader market adoption of both our ORION<sup>®</sup> and ANTARES<sup>®</sup> single wafer products. We did not anticipate that global economic concerns, and to a much lesser extent the Japanese earthquake, would lead to a pause in capacity and technology investments for many of our customers. In response, we believe we made appropriate adjustments to our plans as events unfolded, including limited hiring and tighter controls on variable costs. However, we remained focused on completing strategic product evaluation programs.

We began fiscal 2011 with a focused list of strategic goals, which included the following:

Gaining ORION<sup>®</sup> process tool of record status at several leading semiconductor manufacturers,

Making the investments required to enable us to ramp ORION<sup>®</sup> and ANTARES<sup>®</sup> product manufacturing capacity, and

Controlling product manufacturing and operating costs.

During the first half of fiscal 2011, in anticipation of growing ORION® and ANTARES® production orders, we made investments to increase our manufacturing integration and checkout capacity. This involves the integration of modules to complete a system and to run wafers through the system to check out the electromechanical systems for these products. In parallel, we continued to make progress toward reducing the manufacturing cycle time and lowering the overall production cost of these products. We also fortified our procurement and manufacturing engineering organization and increased our outsourcing in an effort to secure other cost reductions.

During the second half of fiscal 2011, we ramped up our ORION® production levels, resulting in a significant inventory investment in anticipation of evaluation system acceptances and related follow-on orders. However, due to a delay in the expected production increase at advanced technology nodes by several customers and order-specific tool configuration changes, the shipment and revenue recognition for several ORION® systems was delayed to fiscal 2012. We expect to utilize this inventory to fill both existing and anticipated orders as customers increase their leading edge production capacity in 2012.\* We anticipate a meaningful increase in revenue contribution from the ORION® product in 2012.\*

In fiscal 2011, we were able to more than double the number of ANTARES® systems shipped as compared to 2010. As device producers emphasize yield improvement for leading edge manufacturing processes, we expect a further increase in ANTARES® unit shipments in fiscal 2012.\*

From a cost control perspective, we limited our staffing investments to recruiting and training manufacturing and field support personnel required to increase production capacity and to support product evaluation and product installation programs. Our engineering, research and development resources focused on supporting the evaluation programs, applications development and product cost reduction activities. During the year we also upgraded our IT systems to support global growth and improve our efficiency.

Our 2012 goals include expanding the applications for which our products can be used by existing and new customers, continuing to reduce product cost and manufacturing cycle time and improving our financial performance leverage.

## **Results of Operations**

### *Sales Revenue and Shipments*

Fiscal 2011 sales revenue increased to \$96.9 million as compared to \$91.0 million in fiscal 2010. The increase related to an increase in shipments from \$91.1 million in fiscal 2010 to \$97.2 million in fiscal 2011 associated with improved single wafer product sales related to the shift in the industry from batch to single wafer products. Fiscal 2010 sales revenue increased to \$91.0 million as compared to \$50.5 million in fiscal 2009. The increase in sales revenue in fiscal 2010 related to an increase in shipments from \$47.8 million in fiscal 2009 to \$91.1 million in fiscal 2010 associated with improved industry and overall global economic conditions.

Based upon our revenue recognition policy, certain shipments to customers are not recognized until customer acceptance. Therefore, depending on timing of shipments and customer acceptances, there are time periods where shipments may exceed sales revenue or due to timing of acceptances, sales revenue may exceed shipments.

International sales were \$55.8 million for fiscal 2011, representing 58% of total sales during fiscal 2011, \$58.1 million for fiscal 2010, representing 64% of total sales during fiscal 2010, and \$35.8 million for fiscal 2009, representing 71% of total sales during fiscal 2009. The decrease in fiscal 2011 international sales as compared to fiscal 2010 related to decreases in Asia, partially offset by increases in Europe. The increase in fiscal 2010 international sales as compared to fiscal 2009 related to increases in all regions associated with improved industry conditions. See Note 12 of the Notes to Consolidated Financial Statements for additional information regarding our international sales.



We ended fiscal 2011 with a backlog of approximately \$18.0 million as compared to \$16.0 million at the end of fiscal 2010. Backlog consists of orders with delivery dates within the next 12 months for which a customer purchase order has been received. Because of the timing and relative size of orders and the possibility of cancellations or customer delays, backlog is not necessarily indicative of sales for future periods.

#### *Gross Margin*

Our gross profit margin fluctuates due to a number of factors, including the geographic and product mix; initial product placement discounts; utilization of manufacturing capacity; and the competitive pricing environment.

Gross margin as a percentage of sales was 41.6% for fiscal 2011 as compared to 47.2% for fiscal 2010 and 32.5% for fiscal 2009. The decrease in gross margin from fiscal 2010 to fiscal 2011 was primarily related to a change in product mix, and costs associated with product evaluation programs and, to a lesser extent, an increase in warranty expense. The decrease was partially offset by improved manufacturing capacity utilization and a decrease in discretionary compensation from \$375,000 in fiscal 2010 to \$77,000 in fiscal 2011 related to lower operating income in fiscal 2011 as compared to fiscal 2010. The increase in gross margin from fiscal 2009 to fiscal 2010 was due primarily to improved manufacturing utilization as a result of higher production and shipment levels. The increase was also due to product mix, reduced warranty claims in fiscal 2010 and \$604,000 of severance expense recorded in fiscal 2009. The improvements were partially offset by \$375,000 of discretionary compensation expense in fiscal 2010. There was no discretionary compensation expense in fiscal 2009.

#### *Selling, General and Administrative Expenses*

Selling, general and administrative expenses were \$19.3 million, or 19.9% of total sales, in fiscal 2011, as compared to \$17.7 million, or 19.4% of total sales, in fiscal 2010 and \$19.5 million, or 38.6% of total sales, in fiscal 2009. The increase in selling, general and administrative expense in fiscal 2011 as compared to fiscal 2010 is due to a 22% increase in service personnel to support concurrent product evaluation programs, partially offset by a decrease in discretionary compensation from \$1,250,000 in fiscal 2010 to \$341,000 in fiscal 2011 related to lower operating income in fiscal 2011 as compared to fiscal 2010. The decrease in selling, general and administrative expenses in fiscal 2010 as compared to fiscal 2009 related primarily to the cost reduction initiatives associated with reductions in headcount and salary reductions taken in fiscal 2009 and improved service technician utilization rates. Severance costs included in selling, general and administrative expense were \$1.1 million in fiscal 2009. The decrease of selling, general and administrative expenses in fiscal 2010 as compared to fiscal 2009 was partially offset by discretionary compensation expense of \$1,250,000 in fiscal 2010 and higher non-cash stock compensation expense of \$703,000 in fiscal 2010 compared to \$301,000 in fiscal 2009. The higher non-cash stock compensation expense in fiscal 2010 was due to vesting under our employees stock purchase plan and the increase in our stock price. There was no discretionary compensation expense in fiscal 2009.

#### *Research and Development Expenses*

Research and development expenses for fiscal 2011 were \$12.8 million, or 13.2% of total sales, as compared to \$12.7 million, or 14.0% of total sales, in fiscal 2010 and \$14.7 million, or 29.1% of total sales, in fiscal 2009. The increase in research and development expenses in fiscal 2011 as compared to fiscal 2010 related primarily to higher expenses associated with a 10% increase in personnel. This increase was offset by a decrease in discretionary compensation from \$875,000 in fiscal 2010 to \$132,000 in fiscal 2011 related to lower operating income in fiscal 2011 as compared to fiscal 2010. The increase was also offset by a decrease in non-cash stock compensation expense from \$604,000 in fiscal 2010 to \$202,000 in fiscal 2011. The decrease in fiscal 2010 as compared to fiscal 2009 related primarily to the cost reduction initiatives associated with reductions in headcount and salary reductions taken in fiscal 2009 and \$875,000 of severance cost in fiscal 2009. The decrease was partially offset by discretionary compensation expense of \$875,000 in fiscal 2010 and higher non-cash stock compensation expense of \$604,000 in fiscal 2010 as compared to \$129,000 in fiscal 2009. The higher non-cash

stock compensation expense in fiscal 2010 was due to vesting under our employees stock purchase plan and the increase in our stock price. There was no discretionary compensation expense in fiscal 2009. The majority of our research and development resources are focused on broadening the applications capabilities of, and supporting demonstrations and evaluations for our products and product cost reduction efforts.

#### *Gain on Sale of Marketable Securities*

We recorded a gain on sale of marketable securities of \$54,000 in fiscal 2010 and \$110,000 in fiscal 2009 associated with ARS redemptions. See further discussion related to ARS transactions at Note 16 of Notes to Consolidated Financial Statements.

#### *Income Tax Benefit*

We recorded income tax benefit of \$4,000 in fiscal 2011, primarily related to a refundable Minnesota research and development credit, which was partially offset by foreign income tax expense. We recorded income tax benefit of \$63,000 in fiscal 2010, primarily related to the reversal of uncertain tax positions as a result of a lapse of the applicable statute of limitations. We recorded an income tax benefit of \$84,000 in fiscal 2009 related primarily to research and development credit utilization in lieu of bonus depreciation and the reversal of uncertain tax positions as a result of a lapse of the applicable statute of limitations. As of August 27, 2011 and August 28, 2010, we had \$392,000 and \$410,000, respectively, of liabilities recorded related to unrecognized tax benefits. Accrued interest and penalties on these unrecognized tax benefits were \$30,000 and \$50,000, as of August 27, 2011 and August 28, 2010, respectively. We recognize potential interest and penalties related to income tax positions, if any, as a component of provision for income taxes on the Consolidated Statements of Operations. Included in the liability balance as of August 27, 2011 are approximately \$362,000 of unrecognized tax benefits that, if recognized, will affect our effective tax rate.

Our deferred tax assets on the balance sheet as of August 27, 2011 have been fully reserved for with a valuation allowance. We assessed both positive and negative factors, including historical losses, projected taxable income and tax planning strategies and determined that there was not sufficient evidence at this time to reverse any portion of the valuation allowance. We will continue to evaluate the need to make adjustments to our valuation allowance based on anticipated future operating performance.

We are utilizing approximately \$8.9 million of net operating loss carryforwards for fiscal 2011 federal income tax purposes. We had approximately \$165.9 million of net operating losses at August 27, 2011 to be carried forward, which will begin to expire in fiscal 2019 through fiscal 2029, if not utilized. Of this amount, approximately \$3.2 million is subject to Internal Revenue Code Section 382 limitations on utilization, which limits the amount that we can offset taxable income to approximately \$1.4 million per year.

#### *Net Income (Loss)*

Net income was \$8.3 million in fiscal 2011 as compared to net income of \$13.0 million in fiscal 2010 and net losses of \$17.6 million in fiscal 2009.

#### **Liquidity and Capital Resources**

Our cash, restricted cash, cash equivalents and marketable securities were approximately \$22.6 million as of August 27, 2011, a decrease of \$15.7 million from the end of fiscal 2010. The net decrease was primarily due to \$14.8 million cash used in operations and \$2.2 million of capital expenditures. The decrease was net of \$0.7 million of proceeds from the issuance of other common stock under our stock plans.

As of August 27, 2011, we had investments in ARS reported at a fair value of \$1.9 million after reflecting a \$0.1 million other than temporary impairment against \$2.0 million par value. The other than temporary impairment was recorded in fiscal 2008. We value our ARS using a mark-to-model approach that relies on discounted cash flows, market data and inputs derived from similar instruments. This model takes into account, among other variables, the base interest rate, credit spreads, downgrade risks and default/recovery risk, the estimated time required to work out the disruption in the traditional auction process and its effect on liquidity, and the effects of insurance and other credit enhancements.

The ARS we hold are marketable securities with long-term stated maturities for which the interest rates are reset every 28 days through an auction process. The auctions have historically provided a liquid market for these securities as investors historically could readily sell their investments at auction. Due to the liquidity issues experienced in global credit and capital markets, the ARS held by us have experienced multiple failed auctions, beginning on February 19, 2008, as the amount of securities submitted for sale has exceeded the amount of purchase orders. During the second quarter of fiscal 2008, we reclassified \$8.5 million of ARS from current marketable securities to long-term marketable securities on the consolidated balance sheet due to difficulties encountered at auction and the conditions in the general debt markets, creating uncertainty as to when successful auctions may be reestablished. During fiscal 2008, \$0.8 million of ARS were partially redeemed. An additional \$3.0 million were redeemed in fiscal 2009 and \$0.9 million were redeemed in fiscal 2010. During fiscal 2011, \$1.8 million par value of ARS were sold at their net book value of \$1.7 million.

All of the ARS held by us continue to carry investment grade ratings and have not experienced any payment defaults. The \$2.0 million par value ARS held by us are backed by student loans and are collateralized, insured and guaranteed by the United States Federal Department of Education and are classified as long-term. ARS that did not successfully auction reset to the maximum interest rate as prescribed in the underlying indenture and the issuers of all of our holdings continue to be current with their interest payments. If uncertainties in the credit and capital markets continue, these markets deteriorate further or any ARS we hold are downgraded by the rating agencies, the Company may be required to recognize additional impairment charges.

In addition, these ARS may not provide the liquidity to us as we need it, and it could take until the final maturity of the underlying notes (from 31 to 32 years) to realize our investments' recorded value. Currently, there is a very limited market for any of these securities and future liquidations at this time, if possible, would likely be at a significant discount.

Accounts receivable increased by \$4.3 million from the end of fiscal 2010. The increase in trade accounts receivable related primarily to the timing in shipments from 41% in the last month of the fourth quarter of fiscal 2010 to 73% in the last month of the fourth quarter of fiscal 2011. Shipments made in the final month of a quarter generally are not collected during that quarter. Trade receivables will fluctuate quarter to quarter depending on individual customers' timing of ship dates, payment terms and cash flow conditions. In certain situations, extended payment terms may be granted to customers.

Inventory increased by approximately \$22.5 million to \$48.6 million at the end of fiscal 2011, as compared to \$26.1 million at the end of fiscal 2010. The increase in inventory occurred in all categories, primarily related to our ORION® and ANTARES® system production increases. Inventory provisions were \$8.0 million at August 27, 2011, as compared to provisions of \$9.4 million at the end of fiscal 2010. The decrease related primarily to scrapping \$3.4 million of obsolete inventory, partially offset by \$2.0 million of additional reserves.

Trade accounts payable increased by approximately \$2.8 million to \$11.2 million as of August 27, 2011, as compared to \$8.4 million at the end of fiscal 2010, related to the timing of inventory receipts and vendor payments.

Deferred profit was \$3.0 million at the end of fiscal 2011 and \$2.7 million at the end of fiscal 2010.

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As of August 27, 2011, our current ratio (the ratio of current assets to current liabilities) was 4.5 to 1.0, and working capital was \$75.1 million.

The following table provides aggregate information about our contractual payment obligations and the periods in which payments are due (in thousands):

Contractual Obligations	Total	Payments due by period			
		Less than 1 year	1-3 years	3-5 years	More than 5 years
Operating Lease Obligations	\$ 988	\$ 505	\$ 460	\$ 23	\$
Purchase Obligations(1)	9,438	9,438			
Royalty Obligations	1,034	1,034			
Other Long-Term Obligations(2)	1,125	125	500	500	
<b>Total</b>	<b>\$ 12,585</b>	<b>\$ 11,102</b>	<b>\$ 960</b>	<b>\$ 523</b>	<b>\$</b>

(1) Purchase obligations include purchase orders entered into in the ordinary course of business.

(2) Other long-term obligations represent payments related to minimum royalty payments or discounts granted under a license agreement. The contractual obligations table above does not include \$0.4 million accrued for unrecognized tax benefits, as the timing of payments or reversals is uncertain.

Capital expenditures were \$2.2 million in fiscal 2011, \$0.6 million in fiscal 2010 and \$0.3 million in fiscal 2009. The increase in capital expenditures in fiscal 2011 related to manufacturing infrastructure and information technology upgrades.

In October 2008, we authorized the use of up to \$3.0 million of our cash to repurchase outstanding shares of our common stock to be effected from time to time in transactions in the public markets or in private purchases. The timing and extent of any repurchases will depend upon market conditions, the trading price of our shares and other factors, subject to the restrictions relating to volume, price and timing of share repurchases under applicable law. The repurchase program may be modified, suspended or terminated at any time by us without notice. We did not repurchase any of our common stock in fiscal 2011, 2010 or 2009.

We filed a shelf registration statement with the SEC on March 30, 2010 to register an indeterminate number of shares of common stock, preferred stock, warrants and units, the aggregate initial offering price of which is not to exceed \$50 million. On June 14, 2010, we closed on a public offering of 6.2 million shares of our common stock at a public offering price of \$3.05 per share. Net proceeds from the sale of the shares, after underwriter discounts and commissions and other offering expenses, were approximately \$17.6 million. We used the net proceeds from the offering for general corporate and working capital purposes. Following the June 2010 stock offering, we have registered under the shelf registration statement an indeterminate number of shares of common stock, preferred stock, warrants and units with an aggregate initial offering price not to exceed \$31 million.

We believe that with existing cash, cash receipts, cash equivalents, marketable securities and internally generated funds, there will be sufficient funds to meet our currently projected working capital requirements, and to meet other cash requirements through at least fiscal 2012.\* We believe that success in our industry requires substantial capital to maintain the flexibility to take advantage of opportunities as they arise. One of our strategic objectives is, as market and business conditions warrant, to consider divestitures, investments or acquisitions of businesses, products or technologies. We may fund such activities with additional equity or debt financing.\* The sale of additional equity or debt securities, whether to maintain flexibility or to meet strategic objectives, could result in additional dilution to our shareholders.\*

### Off-Balance Sheet Arrangements

We do not have any off balance sheet arrangements.

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**ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

Our cash flows and earnings are subject to fluctuations in foreign exchange rates due to certain foreign investments. As of August 27, 2011, our investments included a 100% interest in our Europe and Asia sales and service offices and a 20% interest in Apprecia, which operates in Japan. We denominate the majority of our sales outside of the U.S. in U.S. dollars.

We have direct sales, service and applications support and logistics responsibilities for our products in Europe and the Asia-Pacific regions and incur labor, service and other expenses in foreign currencies. As a result, we may be exposed to fluctuations in foreign exchange rate risks.\* As of August 27, 2011, we had not entered into any hedging activities and our foreign currency transaction gains and losses for fiscal 2011 were insignificant. We periodically evaluate various hedging activities and other options to minimize these risks.

We do not have significant exposure to changing interest rates as we currently have no material long-term debt. As of the end of fiscal 2011, amortized cost approximated market value for all outstanding marketable securities. We do not undertake any specific actions to cover our exposure to interest rate risk and we are not party to any interest rate risk management transactions. The impact on income before income taxes of a 1% change in short-term interest rates would be approximately \$226,000 based on our cash, restricted cash, cash equivalents and marketable securities balances as of August 27, 2011.

As of August 27, 2011, our investment portfolio included ARS reported at a fair value of \$1.9 million after reflecting a \$0.1 million other than temporary impairment against \$2.0 million par value. The other than temporary impairment was recorded in fiscal 2008. The interest rates of our ARS are reset every 28 days through an auction process and at the end of each reset period, investors can sell or continue to hold the securities at par.

The ARS held by us are backed by student loans and are collateralized, insured and guaranteed by the United States Federal Department of Education. All ARS held by us are rated by the major independent rating agencies and carry investment grade ratings and have not experienced any payment defaults.

All of our ARS have experienced failed auctions due to sell orders exceeding buy orders. These failures are not believed to be a credit issue, but rather reflect a lack of liquidity in the market for these securities. Under the contractual terms, the issuer is obligated to pay penalty interest rates should an auction fail. In the event we need to access funds associated with failed auctions, they are not expected to be accessible until a successful auction occurs, the issuer redeems the issue, a buyer is found outside of the auction process or the underlying securities have matured and are paid upon maturity in accordance with their terms.

We determined and recorded an other than temporary impairment of approximately \$0.4 million as of August 28, 2008. Approximately \$0.1 million of this other than temporary impairment was reversed in fiscal 2010 in connection with the redemption of approximately \$0.9 million ARS at par value. Approximately \$0.1 million of this other than temporary impairment was reversed in fiscal 2009 in connection with the redemption of approximately \$3.0 million ARS at par value. During fiscal 2011, we sold approximately \$1.8 million par value ARS at their net book value of \$1.7 million. If the issuers of the ARS are unable to successfully close future auctions or do not redeem the ARS, or the United States government fails to support its guaranty of the obligations, we may be required to record additional impairment charges.

**ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**  
**FSI INTERNATIONAL, INC. AND SUBSIDIARIES**

**CONSOLIDATED STATEMENTS OF OPERATIONS**

**Years ended August 27, 2011, August 28, 2010 and August 29, 2009**

**(in thousands, except per share amounts)**

	<b>2011</b>	<b>2010</b>	<b>2009</b>
Sales	\$ 96,880	\$ 90,985	\$ 50,484
Cost of goods sold	56,564	48,067	34,057
Gross margin	40,316	42,918	16,427
Selling, general and administrative expenses	19,277	17,684	19,504
Research and development expenses	12,768	12,703	14,674
Operating income (loss)	8,271	12,531	(17,751)
Interest expense	(3)		(41)
Interest income	92	103	261
Gain on sale of marketable securities		54	110
Other (expense) income , net	(41)	270	(287)
Income (loss) before income taxes	8,319	12,958	(17,708)
Income tax benefit	(4)	(63)	(84)
Net income (loss)	\$ 8,323	\$ 13,021	\$ (17,624)
Income (loss) per share			
Basic	\$ 0.22	\$ 0.39	\$ (0.57)
Diluted	\$ 0.21	\$ 0.39	\$ (0.57)
Weighted average common shares basic	38,677	33,301	31,129
Weighted average common shares diluted	39,178	33,628	31,129

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

## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## CONSOLIDATED BALANCE SHEETS

(in thousands)

	August 27, 2011	August 28, 2010
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 20,478	\$ 34,365
Restricted cash	215	322
Trade accounts receivable, less allowance for doubtful accounts of \$112	23,196	18,935
Inventories, net	48,630	26,145
Other receivables	2,627	2,489
Prepaid expenses and other current assets	1,614	1,184
Total current assets	96,760	83,440
Property, plant and equipment, net	14,805	13,204
Long-term marketable securities	1,907	3,612
Investment	460	460
Other assets	1,677	1,582
Total assets	\$ 115,609	\$ 102,298
<b>Liabilities and Stockholders Equity</b>		
Current liabilities:		
Trade accounts payable	\$ 11,226	\$ 8,396
Accrued expenses	7,473	8,020
Deferred profit	2,997	2,669
Total current liabilities	21,696	19,085
Long-term accrued expenses	392	410
Commitments and contingencies (Notes 3 and 17)		
Stockholders equity:		
Preferred stock, no par value; 9,700 shares authorized; none issued and outstanding		
Series A Junior Participating Preferred stock, no par value; 300 shares authorized; none issued and outstanding		
Common stock, no par value; 50,000 shares authorized; issued and outstanding, 38,861 and 38,544 shares, respectively	245,491	244,796
Accumulated deficit	(157,026)	(165,349)
Accumulated other comprehensive loss	(117)	(870)
Other stockholders equity	5,173	4,226
Total stockholders equity	93,521	82,803
Total liabilities and stockholders equity	\$ 115,609	\$ 102,298

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

## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF STOCKHOLDERS EQUITY AND COMPREHENSIVE INCOME (LOSS)

Years ended August 27, 2011, August 28, 2010 and August 29, 2009

(in thousands)

	Common Stock		Accumulated		Other	
	Number	Amount	Accumulated	Comprehensive	Stockholders	Total
	of		Deficit	(Loss)	Equity	
	Shares			Income		
Balance August 30, 2008	30,839	\$ 226,352	\$ (160,746)	\$ (218)	\$ 2,270	\$ 67,658
Stock issuance	797	210				210
Comprehensive loss:						
Foreign currency translation adjustment				(30)		(30)
Net loss			(17,624)			(17,624)
Total comprehensive loss						(17,654)
Stock compensation expense					443	443
Balance August 29, 2009	31,636	226,562	(178,370)	(248)	2,713	50,657
Net proceeds from public offering of common stock	6,210	17,605				17,605
Stock issuance	698	629				629
Comprehensive income:						
Foreign currency translation adjustment				(622)		(622)
Net income			13,021			13,021
Total comprehensive income						12,399
Stock compensation expense					1,513	1,513
Balance August 28, 2010	38,544	244,796	(165,349)	(870)	4,226	82,803
Stock issuance	317	695				695
Comprehensive income:						
Foreign currency translation adjustment				753		753
Net income			8,323			8,323
Total comprehensive income						9,076
Stock compensation expense					947	947
Balance August 27, 2011	38,861	\$ 245,491	\$ (157,026)	\$ (117)	\$ 5,173	\$ 93,521

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



## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF CASH FLOWS

Years ended August 27, 2011, August 28, 2010 and August 29, 2009

(in thousands)

	2011	2010	2009
<b>Operating Activities</b>			
Net income (loss)	\$ 8,323	\$ 13,021	\$ (17,624)
Adjustments to reconcile net income (loss) to net cash (used in) provided by operating activities:			
Stock compensation expense	945	1,444	482
Gain on sale of marketable securities		(54)	(110)
Depreciation	2,115	2,561	3,398
Amortization			61
Loss (gain) on sale or disposal of equipment	16	(88)	46
Changes in operating assets and liabilities:			
Restricted cash	107	121	(43)
Trade accounts receivable	(4,261)	(10,237)	916
Inventories	(22,485)	(4,932)	5,998
Prepaid expenses and other assets	(663)	918	2,933
Trade accounts payable	1,345	5,226	(1,135)
Accrued expenses	(563)	973	(3,530)
Customer deposits		(12)	5
Deferred profit	328	307	(1,505)
Net cash (used in) provided by operating activities	(14,793)	9,248	(10,108)
<b>Investing Activities</b>			
Capital expenditures	(2,247)	(618)	(325)
Sales of marketable securities	1,705	900	2,950
Proceeds from sale of equipment		88	
Decrease in restricted cash		375	
Decrease in other assets			116
Net cash (used in) provided by investing activities	(542)	745	2,741
<b>Financing Activities</b>			
Net proceeds from public offering of common stock		17,605	
Net proceeds from issuance of common stock	695	629	210
Principle payments on capital leases			(841)
Net cash provided by (used in) financing activities	695	18,234	(631)
Effect of exchange rate on cash	753	(622)	(30)
(Decrease) increase in cash and cash equivalents	(13,887)	27,605	(8,028)
Cash and cash equivalents at beginning of year	34,365	6,760	14,788
Cash and cash equivalents at end of year	\$ 20,478	\$ 34,365	\$ 6,760

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

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**FSI INTERNATIONAL, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(1) Description of Business and Summary of Significant Accounting Policies**

*Description of Business*

FSI International, Inc. (the "Company") is a global supplier of surface conditioning equipment (process equipment used to etch and clean organic and inorganic materials from the surface of a silicon wafer) and technology and support services for microelectronics manufacturing. The Company's broad portfolio of batch and single-wafer cleaning products includes process technologies for immersion (a method used to clean silicon wafers by immersing the wafer in multiple tanks filled with process chemicals), spray (sprays chemical mixtures, water and nitrogen in a variety of sequences on to the microelectronic substrate), vapor (utilizes gas phase chemistries to selectively remove sacrificial surface films) and CryoKinetic (a momentum transfer process used to remove non-chemically bonded particles from the surface of a microelectronic device). The Company's support services programs provide product and process enhancements to extend the life of installed FSI equipment.

The Company's customers include microelectronics manufacturers located throughout North America, Europe, Japan and the Asia Pacific region.

*Basis of Presentation*

The accompanying consolidated financial statements include the accounts of FSI International, Inc. and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

The Company's fiscal year ends on the last Saturday in August and is comprised of 52 or 53 weeks. Fiscal 2011, 2010 and 2009 each consisted of a 52-week period.

The Company determined that certain expenses were understated as a result of intercompany transactions being recorded improperly. The error was discovered prior to filing the first quarter fiscal 2011 Form 10-Q and was thought to be limited in nature. During the second quarter of fiscal 2011, additional analysis was performed. The Company corrected the error to properly present its consolidated financial statements as of and for the three and six months ended February 26, 2011 in accordance with generally accepted accounting principles. The Company adjusted beginning accumulated deficit by an immaterial amount of \$778,000 to reflect the correction of the cumulative understatement of expenses for periods through August 30, 2008. The Company corrected the remaining understatement of \$341,000 related to the fiscal year 2010 within the three months ended November 27, 2010 and \$222,000 related to the fiscal year 2009 within the three months ended February 26, 2011.

As a result of recording the correcting adjustment for the cumulative understatement of expenses for periods through August 30, 2008, the consolidated balance sheet as presented for August 28, 2010 was adjusted. The Company increased accumulated deficit by \$778,000 to \$165.3 million from \$164.6 million. The Company decreased accumulated other comprehensive loss from \$1.6 million to \$0.9 million.

As a result of recording the correcting adjustment for the cumulative understatement of expenses for periods subsequent to August 30, 2008, the consolidated statement of operations presented for fiscal 2011 was adjusted. Net income for fiscal 2011 was reduced by \$563,000. The correction reduced diluted earnings per share by \$0.02 to \$0.23 for fiscal 2011.

The Company concluded that the impact of this error is not material to any one period within its previously issued financial statements. The Company determined that reflecting the cumulative correction within the financial statements as an immaterial revision to beginning accumulated deficit and as an adjustment to the

**FSI INTERNATIONAL, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

consolidated statements of operations for fiscal 2011 is also not material. The Company will continue to reflect the revision to its beginning accumulated deficit for previously issued financial statements in its prospective filings with the SEC.

*Revenue Recognition*

The Company recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the purchase price is fixed or determinable and collectibility is reasonably assured. If the Company's sales to existing customers involve equipment that has been demonstrated to meet product specifications prior to shipment, the Company accounts for the product sale as a multiple element arrangement. Revenue from multiple element arrangements is allocated among the separate accounting units based on the relative selling price of each deliverable. The Company recognizes the equipment revenue upon shipment and transfer of title. The other elements include installation, service contracts and training. Equipment installation revenue is valued based on estimated service person hours to complete installation and quoted service labor rates and is recognized when the labor has been completed and the equipment has been accepted by the customer. Service contract revenue is determined based on estimated service person hours to complete the service and quoted service labor rates and is recognized over the contract period. Training revenue is determined based on quoted training class prices and is recognized when the customers complete the training classes or when a customer-specific training period has expired. The quoted service labor rates and training class prices are rates actually charged and billed to the Company's customers.

All other product sales with customer specific acceptance provisions are recognized upon customer acceptance. Revenue related to spare parts sales is recognized upon shipment or delivery based on the title transfer terms. Revenue related to maintenance and service contracts are recognized ratably over the duration of the contracts.

We collect various sales and value-added taxes on certain product and services sales. These product and services sales are accounted for on a net basis.

*Other Comprehensive Income (Loss)*

Other comprehensive loss pertains to revenues, expenses, gains, and losses that are not included in net loss, but rather are recorded directly in stockholders' equity. For fiscal 2011, 2010 and 2009, other comprehensive income (loss) consisted of foreign currency translation adjustments.

*Cash and Cash Equivalents*

Cash and cash equivalents include cash and highly liquid investments purchased with an original maturity of three months or less and are valued at cost, which approximates fair values. The Company utilizes a cash management system under which a book cash overdraft may exist for its primary disbursement account. This overdraft represents uncleared checks in excess of cash balances in the bank account at the end of the reporting period and has been reclassified to current liabilities on the consolidated balance sheets and is reflected in cash provided by (used in) operating activities in the consolidated statements of cash flows. The Company transfers cash on an as-needed basis to fund cleared checks.

## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

*Marketable Securities*

The Company accounts for its marketable securities as available-for-sale and reports them at fair market value. Fair market values of the Company's auction rate securities (ARS) are based on a mark-to-model approach. In determining the fair market value of its ARS, the Company has made assumptions related to interest rates, credit worthiness of the issuer and the Company's ability and intent to hold the investments until recovery of fair value. The Company categorizes losses on debt securities available-for-sale or held-to-maturity determined by management to be other-than-temporarily impaired into losses due to credit issues and losses related to all other factors. Other-than-temporary impairment (OTTI) exists when it is more likely than not that the security will mature or be sold before its amortized cost basis can be recovered. An OTTI related to credit losses is recognized through earnings. An OTTI related to other factors is recognized in other comprehensive income.

*Allowance for Doubtful Accounts*

The Company makes estimates of the uncollectibility of accounts receivable. Management specifically analyzes accounts receivable and analyzes historical bad debts, customer concentrations, customer credit-worthiness, current economic trends and changes in customer payment terms when evaluating the adequacy of the allowance for doubtful accounts. Accounts receivable are determined to be past due based on payment terms and are charged off after management determines that they are uncollectible.

A rollforward of the allowance for doubtful accounts for the fiscal years ended August 27, 2011, August 28, 2010 and August 29, 2009 is as follows (in thousands):

	Balance at Beginning of Year	Recoveries	Bad Debt Expense	Write- offs	Balance at End of Year
Fiscal year ended August 27, 2011	\$ 112	\$	\$	\$	\$ 112
Fiscal year ended August 28, 2010	\$ 125	\$ (13)	\$	\$	\$ 112
Fiscal year ended August 29, 2009	\$ 128	\$ (21)	\$ 18	\$	\$ 125

*Inventories*

Inventories are valued at the lower of cost, determined by the first-in, first-out method, or net realizable value. The Company records provisions for inventory shrinkage and for potentially excess, obsolete and slow moving inventory. The amounts of these provisions are based upon historical loss trends, inventory levels, physical inventory and cycle count adjustments, expected product lives, forecasted sales demand and recoverability.

*Property, Plant and Equipment*

Building and related costs are carried at cost and depreciated on a straight-line basis over a 5 to 30-year period. Leasehold improvements are carried at cost and depreciated over a three- to fifteen-year period or the term of the underlying lease, whichever is shorter. All other property, plant and equipment assets are carried at cost and depreciated on a straight-line basis over their estimated economic lives. Principal economic lives for these assets are one to seven years. Software developed for internal use is depreciated over three to five years beginning when the system is placed in service. Maintenance and repairs are expensed as incurred; significant renewals and improvements are capitalized.

## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

*Impairment of Long-Lived Assets*

The Company assesses the impairment of long-lived assets, whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An asset or asset group is considered impaired if its carrying amount exceeds the undiscounted future net cash flow the asset or asset group is expected to generate. If an asset or asset group is considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the asset exceeds its fair value. If estimated fair value is less than the book value, the asset is written down to the estimated fair value and an impairment loss is recognized.

*Income Taxes*

Deferred income taxes are provided in amounts sufficient to give effect to temporary differences between financial and tax reporting. The Company accounts for tax credits as reductions of income tax expense in the year in which such credits are allowable for tax purposes.

The Company's effective income tax rate is based on income, statutory tax rates and tax planning opportunities available to it in the various jurisdictions in which it operates. The Company has established valuation allowances against its U.S. and non-U.S. net operating losses to reflect the uncertainty of its ability to fully utilize these benefits given the limited carryforward periods permitted by the various jurisdictions. The evaluation of the realizability of the Company's net operating losses requires the use of considerable management judgment to estimate the future taxable income for the various jurisdictions, for which the ultimate amounts and timing of such estimates may differ. The Company assessed both positive and negative factors, including historical losses, projected taxable income and tax planning strategies and determined that there was not sufficient evidence at this time to reverse any portion of the valuation allowance. The Company will continue to evaluate the need to make adjustments to the valuation allowance based on anticipated future operating performance.

*Product Warranty*

Generally, the Company warrants to the original purchaser that new equipment manufactured be free from defects in material and workmanship for six months to two years, depending upon the product or customer agreement. Provision is made for the estimated cost of maintaining product warranties at the time the product is sold. Special warranty provisions are also accrued for major rework campaigns.

Warranty provisions and claims for the fiscal years ended August 27, 2011, August 28, 2010 and August 29, 2009 were as follows (in thousands):

	August 27, 2011	August 28, 2010	August 29, 2009
Beginning balance	\$ 1,127	\$ 1,702	\$ 2,757
Warranty provisions	2,116	775	450
Warranty claims	(1,755)	(870)	(1,460)
Change in estimates	663	(480)	(45)
Ending Balance	\$ 2,151	\$ 1,127	\$ 1,702

During fiscal 2011, the Company increased the accrual for changes in estimates by \$663,000 due to increased claims experience. During fiscal 2010, the Company reversed \$480,000 of unused prior period warranty accruals associated with improved claims experience.

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**FSI INTERNATIONAL, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

*Foreign Currency Translation*

For each of our foreign operating subsidiaries the functional currency is generally its local currency. Assets and liabilities of foreign operations are translated into U.S. dollars using month-end exchange rates, and revenue and expenses are translated into U.S. dollars using average exchange rates. The effects of foreign currency translation adjustments are included as a component of accumulated other comprehensive (loss) income in stockholders' equity.

Foreign currency transaction gains and losses are a result of the effect of exchange rate changes on transactions denominated in currencies other than the functional currency. Foreign currency transaction gains (losses) are included in other income, net.

*Income (Loss) Per Common Share*

Basic loss per share is computed by dividing net loss by the weighted average number of shares of common stock outstanding during the period. Diluted income per share is computed by dividing net income by the weighted average number of common stock and common stock equivalents outstanding during the period. The number of common stock equivalents excluded from diluted income per share was 2,970,000 for fiscal 2011 and 2,818,000 for fiscal 2010, because their exercise prices were greater than the average market price of the Company's common stock during the same respective periods. Diluted loss per common share for fiscal year 2009 does not include the effect of potential dilutive common stock equivalents as their inclusion would be antidilutive. The number of potential dilutive common stock equivalents excluded from the computation of diluted loss per share was 3,399,000 for fiscal 2009.

*Use of Estimates*

In preparing the consolidated financial statements in conformity with U. S. generally accepted accounting principles ( GAAP ), management must make decisions that impact the reported amounts of assets, liabilities, revenues, expenses, and the related disclosures, including disclosures of contingent assets and liabilities. Such decisions include the selection of the appropriate accounting principles to be applied and the assumptions on which to base accounting estimates. Estimates are used in determining, among other items, employee incentive accruals, inventory valuation, warranty reserves, allowance for doubtful accounts, valuation allowances on deferred tax assets, and future cash flows associated with impairment testing for other long-lived assets. These estimates and assumptions are based on management's best estimates and judgments. Management evaluates its estimates and assumptions on an ongoing basis using historical experience and other factors that management believes to be reasonable under the circumstances, including the current economic environment, adjusting such estimates and assumptions when facts and circumstances dictate. As future events and their effects cannot be determined with precision, actual amounts could differ significantly from those estimated at the time the consolidated financial statements are prepared.

*Employee Stock Plans*

For fiscal 2011, 2010 and 2009, the Company's results of operations reflect compensation expense for new stock options granted and vested under its stock incentive plan and employees stock purchase plan during the fiscal year and the unvested portion of previous stock option grants which vested during the fiscal year.

**(2) Concentration of Risk and Financial Instruments**

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist principally of cash equivalents, marketable securities and trade accounts receivable.

## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Company's customers consist of microelectronics manufacturers located throughout the world. The Company performs ongoing credit evaluations of its customers' financial condition and generally requires no collateral from them. The Company maintains an allowance for doubtful accounts receivable based upon expected collectibility of all accounts receivable.

The Company invests in a variety of financial instruments such as auction-rate securities and money market fund shares. The Company, by policy, limits the amount of credit exposure with any one financial or commercial issuer.

The carrying amount of the Company's financial instruments, which includes cash equivalents, short-term marketable securities, accounts receivable, accounts payable and accrued expenses, approximate fair value at August 27, 2011, due to their short maturities.

As of August 27, 2011 and August 28, 2010, all marketable securities were classified as available-for-sale. There were no short-term marketable securities as of August 27, 2011 and August 28, 2010. The carrying amount of long-term marketable securities was \$1,907,000 as of August 27, 2011 and \$3,612,000 as of August 28, 2010. The balance is net of an other-than-temporary impairment of \$93,000 as of August 27, 2011 and \$188,000 as of August 28, 2010. See Note 16 of the Notes to Consolidated Financial Statements for further discussion related to the impairment.

The Company manages its cash equivalents as a single portfolio of highly marketable securities, all of which are intended to be available to meet the Company's current cash requirements.

**(3) Lease Commitments**

The Company has operating lease agreements for equipment and manufacturing and office facilities. The future net minimum lease payments for all leases with noncancellable lease terms in excess of one year at August 27, 2011 are as follows (in thousands):

	Operating Leases
Fiscal Year Ending August:	
2012	\$ 505
2013	257
2014	203
2015	22
2016	1
Thereafter	
Total minimum lease payments	\$ 988

Rental expense for all operating leases consisted of the following (in thousands):

	August 27, 2011	Fiscal Year Ended August 28, 2010	August 29, 2009
Rent expense for operating leases	\$ 872	\$ 786	\$ 1,213

## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

**(4) Inventories**

Inventories are summarized as follows (in thousands):

	August 27, 2011	August 28, 2010
Finished goods, including evaluation systems	\$ 6,696	\$ 4,238
Work in process	22,848	9,453
Raw materials and purchased parts	19,086	12,454
	\$ 48,630	\$ 26,145

**(5) Property, Plant and Equipment**

The components of property, plant and equipment are as follows (in thousands):

	August 27, 2011	August 28, 2010
Land	\$ 224	\$ 224
Building and leasehold improvements	34,408	33,242
Office furniture and equipment	3,892	3,893
Computer hardware and software	15,022	14,666
Manufacturing equipment	1,855	1,717
Lab equipment	17,227	17,085
Tooling	233	233
Capital programs in progress	1,521	442
	74,382	71,502
Less accumulated depreciation and amortization	(59,577)	(58,298)
	\$ 14,805	\$ 13,204

**(6) Accrued Expenses**

Accrued expenses are summarized as follows (in thousands):

	August 27, 2011	August 28, 2010
Salaries and benefits	\$ 1,290	\$ 1,028
Discretionary compensation and bonus	805	2,964
Vacation	1,145	1,055
Product warranty	2,151	1,127
Other	2,082	1,846



\$ 7,473      \$ 8,020

## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

**(7) Deferred Profit**

Deferred profit as of the end of the fiscal year consists of (in thousands):

	August 27, 2011	August 28, 2010
Deferred revenue	\$ 3,234	\$ 2,865
Deferred cost of goods sold	(237)	(196)
Deferred profit	\$ 2,997	\$ 2,669

**(8) Income Taxes**

Income (loss) before income taxes was derived from the following sources (in thousands):

	Fiscal Year Ended		
	August 27, 2011	August 28, 2010	August 29, 2009
Domestic	\$ 6,719	\$ 12,399	\$ (16,984)
Foreign	1,600	559	(724)
	\$ 8,319	\$ 12,958	\$ (17,708)

Income tax benefit is summarized as follows (in thousands):

	Fiscal Year Ended		
	August 27, 2011	August 28, 2010	August 29, 2009
Current:			
Federal	\$ 2	\$ (8)	\$ (83)
Foreign	(10)	(65)	(32)
State	4	10	31
	(4)	(63)	(84)
Deferred:			
Foreign			
State			
	\$ (4)	\$ (63)	\$ (84)



## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities at August 27, 2011 and August 28, 2010 are as follows (in thousands):

	August 27, 2011	August 28, 2010
Deferred tax assets:		
Inventory	\$ 4,262	\$ 4,601
Deferred profit	404	82
Accounts receivable	42	42
Property, plant and equipment, net	1,237	1,150
Credit carryforwards	6,820	6,616
Net operating loss carryforwards	62,050	64,250
Accruals	1,255	1,817
<b>Total gross deferred tax assets</b>	<b>76,070</b>	<b>78,558</b>
Deferred tax liabilities:		
Other, net	506	445
Investment in foreign affiliate	118	118
<b>Total gross deferred tax liabilities</b>	<b>624</b>	<b>563</b>
Less valuation allowance	(75,446)	(77,995)
<b>Net deferred tax assets</b>	<b>\$</b>	<b>\$</b>

The effective income tax expense (benefit) differs from the expected statutory federal income tax as follows (in thousands):

	Fiscal Year Ended		
	August 27, 2011	August 28, 2010	August 29, 2009
Expected federal income tax expense (benefit)	\$ 2,911	\$ 4,535	\$ (6,198)
State income tax benefit before valuation allowance	197	337	(496)
Research activities credit	(167)	(50)	(225)
Foreign subsidiary income	(560)		
Valuation allowance	(2,723)	(5,221)	6,660
Stock compensation expense	331	520	169
Change in unrecognized tax benefits	(36)	(68)	(32)
Other items, net	43	(116)	38
	<b>\$ (4)</b>	<b>\$ (63)</b>	<b>\$ (84)</b>

## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

A reconciliation of the beginning and ending amount of total gross unrecognized tax benefits is as follows (in thousands):

	Fiscal Year Ended		
	August 27, 2011	August 28, 2010	August 29, 2009
Beginning balance	\$ 410	\$ 512	\$ 583
Decrease related to prior year tax position	(131)	(174)	(139)
Increase related to current year tax positions	113	72	68
Ending balance	\$ 392	\$ 410	\$ 512

The Company recorded a tax benefit of \$4,000 for fiscal 2011 related primarily to a refundable Minnesota research and development credit, which was partially offset by foreign income tax expense. The Company recorded a tax benefit of \$63,000 for fiscal 2010 related primarily to the reversal of uncertain tax positions as a result of the lapse of the applicable statute of limitations. The Company recorded a tax benefit of \$84,000 for fiscal 2009 related primarily to research and development credit utilization in lieu of bonus depreciation and the reversal of uncertain tax positions as a result of a lapse of the applicable statute of limitations.

The Company is utilizing approximately \$8.9 million of net operating loss carryforwards for fiscal 2011 federal income tax purposes. The Company had approximately \$165.9 million of net operating loss at August 27, 2011 to be carried forward, which will begin to expire in fiscal 2019 through 2029, if not utilized. Of this amount, approximately \$3.2 million is subject to Internal Revenue Code Section 382 limitations on utilization. This limitation is approximately \$1.4 million per year. The Company has net operating loss carryforwards for state purposes of approximately \$69.3 million, which will expire at various times, beginning with fiscal year 2012, if not utilized.

The Company maintains a valuation allowance to fully reserve against its net deferred tax assets due to uncertainty over the ability to realize these assets. The Company assessed available evidence both positive and negative, including historical losses, projected taxable income and tax planning strategies, and determined that a full valuation allowance was still necessary. The change in the valuation allowance during the fiscal year 2011 was \$2.5 million. Included in the August 27, 2011 valuation allowance balance of \$75.4 million is \$3.9 million, which will be recorded as a credit to stockholders' equity, if it is determined in the future that this portion of the valuation allowance is no longer required.

As of August 27, 2011 and August 28, 2010, the Company had \$392,000 and \$410,000, respectively, of liabilities recorded related to unrecognized tax benefits. Included in the liability balance as of August 27, 2011 and August 28, 2010, are approximately \$362,000 and \$360,000, respectively, of unrecognized tax benefits that, if recognized, will affect the Company's effective tax rate. Accrued interest and penalties on these unrecognized tax benefits were \$30,000 and \$50,000 as of August 27, 2011 and August 28, 2010, respectively. The Company recognizes potential interest and penalties related to income tax positions, if any, as a component of provision for income taxes on the Consolidated Statements of Operations. The Company does not anticipate that the total amount of unrecognized tax benefits will significantly change during the next twelve months.

The Company and its subsidiaries are subject to U.S. federal income tax as well as income tax of numerous state and foreign jurisdictions. The Company is generally no longer subject to U.S. federal tax, state tax and foreign tax examinations by tax authorities for fiscal years before fiscal 2008 and with limited exceptions, state tax and foreign tax examinations by tax authorities for fiscal years before fiscal 2006.

## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

**(9) Retirement Plans**

The Company has an Employee 401(k) Retirement Plan, which allows matching contributions for eligible employees equal to 100% of the first 3% of employee contributions and 50% of the next 2% of employee contributions. The Company contributed approximately \$611,000 in fiscal 2011, \$479,000 in fiscal 2010 and \$537,000 in fiscal 2009.

In addition, the Company has statutory pension plans in Europe and Asia and contributed approximately \$184,000 in fiscal 2011, \$146,000 in fiscal 2010, and \$214,000 in fiscal 2009.

**(10) Stock Options**

Stock-based compensation expense for stock options granted or vested under the Company's stock incentive plans and employees stock purchase plan ( ESPP ) was reflected in the Consolidated Statements of Operations for fiscal 2011, 2010 and 2009 as follows (in thousands):

	Fiscal Year Ended		
	August 27, 2011	August 28, 2010	August 29, 2009
Cost of goods sold	\$ 123	\$ 137	\$ 52
Selling, general and administrative	620	703	301
Research and development	202	604	129
Amount charged against net income (loss)	\$ 945	\$ 1,444	\$ 482

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option-pricing method. The Company uses historical data to estimate the expected price volatility, the expected option life and the expected forfeiture rate. The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant for the estimated life of an option. The Company has not made any dividend payments nor does it have plans to pay dividends in the foreseeable future. The following assumptions were used to estimate the fair value of options granted under the Company's plan and the ESPP during fiscal 2011, 2010 and 2009 using the Black-Scholes option-pricing model:

Fiscal Year	Options			ESPP		
	2011	2010	2009	2011	2010	2009
Annualized dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Expected stock price volatility	80.1%	80.3%	74.0%	80.1%	80.3%	75.5%
Risk free interest rate	1.7%	2.1%	1.6%	0.1%	0.2%	0.3%
Expected life (in years)	6.4	5.5	5.4	0.5	0.5	0.5

## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

A summary of the option activity for the stock option plans for fiscal 2011 is as follows (in thousands, except price per share and contractual term):

	Number of Shares	Weighted- average Exercise Price Per Share	Weighted- average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at August 28, 2010	3,146	\$ 5.02		
Options granted	777	3.74		
Options forfeited				
Options expired	(315)	8.26		
Options exercised	(136)	1.83		
Outstanding at August 27, 2011	3,472	\$ 4.56	5.5	\$ 510
Exercisable at August 27, 2011	2,394	\$ 5.12	3.9	\$ 369

The aggregate intrinsic value for options outstanding and exercisable at August 28, 2010 was \$571,000 and \$185,000, respectively.

The weighted average grant date fair value based on the Black-Scholes option-pricing model for options granted in fiscal 2011 was \$2.59 per share, for options granted in fiscal 2010 was \$1.96 per share and for options granted in fiscal 2009 was \$0.22 per share. The intrinsic value of options exercised during fiscal 2011 was \$348,000 and during fiscal 2010 was \$542,000. There were no options exercised during fiscal 2009.

A summary of the status of unvested option shares as of August 27, 2011 is as follows (in thousands, except fair value amounts):

	Number of Shares	Weighted- average Grant- date Fair Value
Unvested at August 28, 2010	730	\$ 1.55
Options granted	777	2.59
Options forfeited		
Options vested	(429)	1.63
Unvested at August 27, 2011	1,078	\$ 2.29

As of August 27, 2011, there was \$2,212,000 of total unrecognized compensation cost related to unvested share-based compensation granted under our plans. That cost is expected to be recognized over a weighted-average period of 1.2 years. The total fair value of option shares vested was \$945,000 during fiscal 2011, \$1,444,000 during fiscal 2010 and \$482,000 during fiscal 2009.

## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The activity under stock option plans of the Company is as follows (in thousands, except per share amounts):

Activity Description	Number of Shares		Weighted-Average Exercise Price Per Share
	Available For Grant	Outstanding	
August 30, 2008	630	3,679	\$ 6.58
Additional shares authorized	500		
Granted	(337)	337	0.35
Exercised			
Canceled	58	(617)	6.05
August 29, 2009	851	3,399	6.05
Additional shares authorized	500		
Granted	(566)	566	3.00
Exercised		(205)	1.26
Canceled	12	(614)	10.14
August 28, 2010	797	3,146	5.02
Additional shares authorized	500		
Granted	(777)	777	3.74
Exercised		(136)	1.83
Canceled		(315)	8.26
August 27, 2011	520	3,472	\$ 4.56

The following table summarizes information with respect to options outstanding and exercisable at August 27, 2011 (number of options outstanding and exercisable in thousands):

Options Outstanding				Options Exercisable		
Range of Exercise Prices		Number of Options Outstanding	Weighted- average Remaining Contractual Life	Weighted- average Exercise Price	Exercisable	Weighted- average Exercise Price
\$0.32	\$ 2.50	680	7.6	\$ 1.41	461	\$ 1.36
\$2.51	\$ 5.00	1,802	6.6	3.81	943	3.83
\$5.01	\$ 7.50	228	4.8	5.26	228	5.26
\$7.51	\$ 9.00	465	2.1	7.82	465	7.82
\$9.01	\$11.00	297	0.7	10.73	297	10.73
\$0.32	\$11.00	3,472	5.5	\$ 4.56	2,394	\$ 5.12

There were 2,416,000 currently exercisable options at a weighted-average exercise price of \$5.82 at August 28, 2010, and 2,932,000 currently exercisable options at a weighted-average exercise price of \$6.86 at August 29, 2009.



**(11) Employees Stock Purchase Plan**

The Company's ESPP enables employees to contribute up to 10% of their wages toward the purchase of the Company's common stock at 85% of the lower of market value at the beginning or the end of the semiannual purchase period. Stockholders authorized the issuance of 1,000,000 additional shares of common stock to the ESPP in fiscal 2011.

## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Shares were issued on the following dates for the following prices (in thousands except per share amounts):

Date	Shares	Price per Share
December 31, 2008	314	\$ 0.26
June 30, 2009	483	0.26
December 31, 2009	420	0.43
June 30, 2010	73	2.63
December 31, 2010	71	3.45
June 30, 2011	110	\$ 2.33

As of August 27, 2011, there were 1,853,000 shares reserved for future employee purchases of stock under the ESPP.

**(12) Segment and Other Information***Segment Information*

The Company sells Surface Conditioning ( SC ) and POLARIS Microlithography ( PSS ) Systems.

The Company's chief operating decision-maker has been identified as the President and Chief Executive Officer. Due to the level of integration of SC and PSS, the Company's chief operating decision-maker reviews consolidated operating results to make decisions about allocating resources and assessing performance for the entire Company. SC and PSS together represent one segment for the manufacture, marketing and servicing of equipment for the microelectronics industry.

*Geographic Information*

International sales were 58% of total sales in fiscal year 2011, 64% of total sales in fiscal year 2010 and 71% of total sales in fiscal year 2009. The basis for determining sales by geographic region is the location to which the product is shipped. Sales by geographic area are summarized as follows (in thousands):

	Fiscal Year Ended		
	August 27, 2011	August 28, 2010	August 29, 2009
Asia	\$ 28,055	\$ 45,136	\$ 27,869
Europe	27,518	12,848	7,926
Other	266	104	20
Total International	55,839	58,088	35,815
Domestic	41,041	32,897	14,669
	\$ 96,880	\$ 90,985	\$ 50,484

South Korea accounted for 12% of total sales in fiscal 2011, 28% of total sales in fiscal 2010 and 43% of total sales in fiscal 2009. Germany accounted for 13% of total sales in fiscal 2011.

*Long-lived Assets*

The Company does not have significant long-lived assets in foreign countries.

## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

*Customer Information*

The following summarizes significant customers comprising 10% or more of the Company's trade accounts receivable as of August 27, 2011 and August 28, 2010 and 10% or more of sales for fiscal 2011, 2010 and 2009, which includes sales through affiliates to end-users:

	% of Trade Accounts Receivable as of		% of Sales for the Fiscal Year Ended		
	August 27, 2011	August 28, 2010	August 27, 2011	August 28, 2010	August 29, 2009
Customer A	*	*	27%	32%	34%
Customer B	64%	*	18%	*	*
Customer C	*	17%	*	*	*
Customer D	*	14%	*	11%	*
Customer E	*	19%	*	*	*
Customer F	*	11%	*	*	*

\* Trade accounts receivable from or sales to respective customer were less than 10% as of the end of or during the fiscal year.

**(13) License Agreements**

The Company, in the ordinary course of business, enters into various licensing agreements. These agreements generally provide for technology transfers between the Company and the licensors in exchange for minimum royalty payments and/or a fixed royalty to the licensors. The total accrued royalty license fees included in accrued expenses were \$1,034,000 at August 27, 2011 and \$608,000 at August 28, 2010. These agreements can generally be terminated by the Company with appropriate notice to the licensors.

**(14) Supplementary Cash Flow Information**

The following summarizes supplementary cash flow items (in thousands):

	Fiscal Year Ended		
	August 27, 2011	August 28, 2010	August 29, 2009
Income taxes paid (received), net	\$ 27	\$ 19	\$ (76)
Interest paid, net	3		41

**(15) Cost Reduction and Realignment**

In the second quarter of fiscal 2009, the Company committed to a plan of additional cost reduction actions, including the reduction of headcount, salary reductions and scheduled plant shutdowns. The cost reduction actions were due to the Company continuing to be impacted by the global economic slowdown and in particular the reduced demand for the Company's products. A total of 111 positions were eliminated of which 37 were manufacturing positions, 37 were sales, service and marketing positions, 8 were administrative positions and 29 were engineering positions. Severance and outplacement costs, net of change in estimate, recorded in fiscal 2009 were allocated as follows: \$1,133,000 to selling, general and administrative expense, \$875,000 to research and development expense and \$604,000 to cost of goods sold.

## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The fiscal 2009 severance and outplacement costs are summarized as follows (in thousands):

	Amount Charged Fiscal 2009	Amount Paid Through August 27, 2011	Accrual at August 27, 2011
Selling, general and administrative expenses	\$ 1,133	\$ 1,133	\$
Research and development expenses	875	875	
Cost of goods sold	604	604	
Total	\$ 2,612	\$ 2,612	\$

**(16) Marketable Securities and Fair Value Measurements**

As of August 27, 2011, the Company had investments in ARS reported at a fair value of \$1.9 million after reflecting a \$0.1 million other than temporary impairment against \$2.0 million par value. The other than temporary impairment was recorded in fiscal 2008. The Company valued the ARS using a mark-to-model approach that relies on discounted cash flows, market data and inputs derived from similar instruments. This model takes into account, among other variables, the base interest rate, credit spreads, downgrade risks and default/recovery risk, the estimated time required to work out the disruption in the traditional auction process and its effect on liquidity, and the effects of insurance and other credit enhancements.

The ARS held by the Company are marketable securities with long-term stated maturities for which the interest rates are reset every 28 days through an auction process and at the end of each reset period, investors can sell or continue to hold the securities at par. The auctions have historically provided a liquid market for these securities as investors historically could readily sell their investments at auction. Due to the liquidity issues experienced in global credit and capital markets, the ARS held by the Company have experienced multiple failed auctions, beginning on February 19, 2008, as the amount of securities submitted for sale has exceeded the amount of purchase orders. During the second quarter of fiscal 2008, the Company reclassified \$8.5 million of ARS from current marketable securities to long-term marketable securities on the Consolidated Balance Sheet due to difficulties encountered at auction and the conditions in the general debt markets creating uncertainty as to when successful auctions may be reestablished. During fiscal 2008, \$0.8 million of ARS were redeemed. An additional \$3.0 million were redeemed in fiscal 2009 and \$0.9 million were redeemed in fiscal 2010. During fiscal 2011, \$1.8 million par value were sold at their net book value of \$1.7 million.

The \$2.0 million par value ARS held by the Company are backed by student loans and are collateralized, insured and guaranteed by the United States Federal Department of Education and are classified as long-term. All of the ARS held by the Company continue to carry investment grade ratings and have not experienced any payment defaults. ARS that did not successfully auction, reset to the maximum interest rate as prescribed in the underlying indenture and all of the Company's holdings continue to be current with their interest payments. If uncertainties in the credit and capital markets continue, these markets deteriorate further or any ARS the Company holds are downgraded by the rating agencies, the Company may be required to recognize additional impairment charges.

The Company categorizes its assets and liabilities into one of three levels based on the assumptions (inputs) used in valuing the asset or liability. Level 1 provides the most reliable measure of fair value, while Level 3 generally requires significant management judgment. The three levels are defined as follows:

Level 1 Quoted prices in active markets for identical assets or liabilities.

Level 2 Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.



## FSI INTERNATIONAL, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Level 3 Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The Company valued its cash and cash equivalents and restricted cash based on level 1 inputs.

The Company valued its ARS based on level 3 inputs in which values are based on prices or valuation techniques that require inputs that are both unobservable and significant to the overall fair value measurement. These level 3 inputs reflect management's own assumptions about the assumptions a market participant would use in pricing the ARS.

The fair value measurements as of August 27, 2011 of cash and cash equivalents, restricted cash and marketable securities are summarized below (in thousands):

	<b>Fair Value</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
Cash and cash equivalents	\$ 20,478	\$ 20,478	\$	\$
Restricted cash	215	215		
Marketable securities	1,907			1,907

The fair value measurements as of August 28, 2010 of cash and cash equivalents, restricted cash and marketable securities are summarized below (in thousands):

	<b>Fair Value</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
Cash and cash equivalents	\$ 34,365	\$ 34,365	\$	\$
Restricted cash	322	322		
Marketable securities	3,612			3,612

The change in the level 3 amounts from August 28, 2010 to August 27, 2011 related to the sales of \$1.8 million par value ARS at their net book value of \$1.7 million.

**(17) Contingencies**

In late calendar 2006, the Company determined that certain of its replacement valves, pumps and heaters could fall within the scope of United States export licensing regulations to products that could be used in connection with chemical weapons processes. The Company determined that these regulations require it to obtain licenses to ship some of its replacement spare parts, spare parts kits and assemblies to customers in certain controlled countries as defined in the export licensing regulations. During the second quarter of fiscal 2007, the Company was granted licenses to ship replacement spare parts, spare parts kits and assemblies to all customers in the controlled countries where the Company conducts business.

The applicable export licensing regulations frequently change. Moreover, the types and categories of products that are subject to export licensing are often described in the regulations in general terms and could be subject to differing interpretations.

In the second quarter of fiscal 2007, the Company made a voluntary disclosure to the United States Department of Commerce to clarify its licensing practices and to review its practices with respect to prior sales of certain replacement valves, pumps and heaters to customers in several controlled countries as defined in the licensing regulations.

**FSI INTERNATIONAL, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

In October 2009, the Company entered into a settlement agreement with the Office of Export Enforcement for \$450,000. The Company paid \$5,000 per month for ten months beginning in November 2009. The remaining \$400,000 owed under the settlement was suspended for 12 months. The 12-month suspension period expired October 29, 2010. The Company believes it has maintained compliance with all export laws during the suspension period and does not anticipate any additional payments.

**(18) Share Repurchase Plan**

In October 2008, the Company authorized the repurchase of up to \$3 million of the Company's common stock to be effected from time to time in transactions in the public markets or in private purchases. The timing and extent of any repurchases will depend upon market conditions, the trading price of the Company's shares and other factors, subject to the restrictions relating to volume, price and timing of share repurchases under applicable law. The repurchase program may be modified, suspended or terminated at any time by the Company without notice. The Company did not repurchase any of its common stock during fiscal 2011, 2010 or 2009.

**(19) Stock Offering**

The Company filed a shelf registration statement with the SEC on March 30, 2010 to register an indeterminate number of shares of common stock, preferred stock, warrants and units, the aggregate initial offering price of which is not to exceed \$50 million. On June 14, 2010, the Company closed on a public offering of 6.2 million shares of its common stock at a public offering price of \$3.05 per share. Net proceeds from the sale of the shares, after underwriter discounts and commissions and other offering expenses, were approximately \$17.6 million. The Company used the net proceeds from the offering for general corporate and working capital purposes. Following the June 2010 stock offering, the Company has registered under its shelf registration statement an indeterminate number of shares of common stock, preferred stock, warrants and units with an aggregate initial offering price not to exceed \$31 million.



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**Report of Independent Registered Public Accounting Firm**

The Board of Directors and Stockholders

FSI International, Inc.

We have audited the accompanying consolidated balance sheets of FSI International, Inc. and subsidiaries as of August 27, 2011 and August 28, 2010, and the related consolidated statements of operations, stockholders' equity and comprehensive income (loss), and cash flows for each of the years in the three-year period ended August 27, 2011. We also have audited FSI International, Inc.'s internal control over financial reporting as of August 27, 2011, based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). FSI International, Inc.'s management is responsible for these consolidated financial statements, 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 these consolidated financial statements and an opinion on the FSI International, Inc.'s internal control over financial reporting 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 audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the consolidated financial statements included 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 and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of FSI International, Inc. and subsidiaries as of August 27, 2011 and August 28, 2010, and the results of their operations and their cash flows for each of the years in the three-year period ended August 27, 2011, in conformity with U.S. generally accepted accounting principles. Also in our opinion, FSI International, Inc. maintained, in all material respects, effective internal control over financial reporting as of August 27, 2011, based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

/s/ KPMG LLP

Minneapolis, Minnesota  
November 4, 2011

# Edgar Filing: FSI INTERNATIONAL INC - Form 10-K

Data for the fiscal quarters of our last two fiscal years is as follows (in thousands, except per share data):

## Quarterly Data

(Unaudited)

	First Quarter (c)	Second Quarter (a), (b), (c)	Third Quarter (b)	Fourth Quarter (a), (b)
<b>2011</b>				
Sales	\$ 10,880	\$ 30,752	\$ 25,598	\$ 29,650
Gross margin	5,171	13,049	11,867	10,229
Operating (loss) income	(2,500)	4,920	4,037	1,814
Net (loss) income	(2,502)	4,920	4,111	1,794
Diluted net (loss) income per common share	\$ (0.06)	\$ 0.13	\$ 0.10	\$ 0.05
<b>2010</b>				
Sales	\$ 14,617	\$ 18,925	\$ 28,653	\$ 28,790
Gross margin	6,567	8,043	13,723	14,585
Operating income	16	513	5,609	6,393
Net (loss) income	(55)	610	5,864	6,602
Diluted net (loss) income per common share	\$ (0.00)	\$ 0.02	\$ 0.18	\$ 0.17

- (a) During the second and fourth quarters of fiscal 2010, the Company recorded a gain of \$6,000 and \$48,000, respectively, associated with ARS redemptions.
- (b) During fiscal 2011 and 2010, the Company recorded discretionary compensation as follows:

	Second Quarter	Third Quarter	Fourth Quarter	Fiscal 2011
Cost of sales	\$ 66	\$ 7	\$ 4	\$ 77
Selling, general and administrative expenses	291	31	19	341
Research and development expenses	113	12	7	132
Total	\$ 470	\$ 50	\$ 30	\$ 550

	Third Quarter	Fourth Quarter	Fiscal 2010
Cost of sales	\$ 180	\$ 195	\$ 375
Selling, general and administrative expenses	600	650	1,250
Research and development expenses	420	455	875
Total	\$ 1,200	\$ 1,300	\$ 2,500

- (c) During the first and second quarters of fiscal 2011, the Company recorded corrections of immaterial errors of \$341,000 related to fiscal 2010 and \$222,000 related to fiscal 2009, respectively.

The Company's fiscal quarters are generally 13 weeks, all ending on a Saturday. The fiscal year ends on the last Saturday in August and consists of 52 or 53 weeks. Fiscal 2011 and fiscal 2010 both consisted of 52 weeks.

**ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**  
None.



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**ITEM 9A. CONTROLS AND PROCEDURES****Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures**

Our management, with the participation of our principal executive officer and our principal financial and accounting officer, have evaluated the effectiveness of our disclosure controls and procedures for the period ended August 27, 2011 (as defined in Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act")). Based on that evaluation, our principal executive officer and our principal financial and accounting officer have concluded that our disclosure controls and procedures are effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our principal executive and our principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

**Changes in Internal Controls Over Financial Reporting**

There were no changes in our internal control over financial reporting during our most recently completed fiscal quarter that have materially affected, or were reasonably likely to materially affect, our internal control over financial reporting.

**Management's Report on Internal Control over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of our management, including our principal executive officer and principal financial and accounting officer, we conducted an assessment of the effectiveness of our internal control over financial reporting based on the framework in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on our assessment under the framework in Internal Control – Integrated Framework, our management concluded that our internal control over financial reporting was effective as of August 27, 2011.

KPMG LLP, an independent registered public accounting firm, has audited the consolidated financial statements included in this Annual Report on Form 10-K and, as part of this audit, has issued their report, included in Item 8, on the effectiveness of our internal control over financial reporting.

/s/ Donald S. Mitchell  
Donald S. Mitchell  
Chairman and Chief Executive Officer

(Principal Executive Officer)

/s/ Patricia M. Hollister  
Patricia M. Hollister  
Chief Financial Officer

(Principal Financial and Accounting Officer)

**Attestation Report of Independent Registered Public Accounting Firm**

The attestation report required under this item is contained in Item 8 of this Annual Report on Form 10-K.

**ITEM 9B. OTHER INFORMATION**

None.

### PART III

Certain information required by Part III is incorporated by reference to our definitive proxy statement for the annual meeting of shareholders to be held on January 18, 2012 and which will be filed with the SEC pursuant to Regulation 14A within 120 days after August 27, 2011.

Except for those portions specifically incorporated in this report by reference to our proxy statement for the annual meeting of shareholders to be held on January 18, 2012, no other portions of the proxy statement are deemed to be filed as part of this Report on Form 10-K.

#### **ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE OF THE REGISTRANT**

The information concerning our directors, our board committees and compliance with Section 16(a) of the Exchange Act required by this item is incorporated by reference to the information under the captions Election of Directors and Compliance with Section 16(a) of the Securities and Exchange Act of 1934 in our proxy statement for the annual meeting of shareholders to be held on January 18, 2012. For information concerning executive officers, see Item 4A. of this Form 10-K Report.

#### **Code of Business Conduct and Ethics**

We have adopted a code of business conduct and ethics applicable to all of our directors and employees, including our principal executive officer, principal financial and accounting officer, controller and other employees performing similar functions. A copy of this code of business conduct and ethics is available on our website at [www.fsi-intl.com](http://www.fsi-intl.com).

We intend to disclose any waiver of our code of business conduct and ethics for our directors or executive officers in future Form 8-K filings within four business days following the date of such waiver. We also intend to post on our website at [www.fsi-intl.com](http://www.fsi-intl.com) any amendment to, or waiver from, a provision of our code of business conduct and ethics that applies to our principal executive officer, principal financial officer, controller and other employees performing similar functions within four business days following the date of such amendment or waiver.

#### **ITEM 11. EXECUTIVE COMPENSATION**

The information required by this item is incorporated by reference to the information under the captions Election of Directors, Compensation Committee Report, Compensation Discussion and Analysis and Compensation of Executive Officers in our proxy statement for the annual meeting of shareholders to be held on January 18, 2012.

#### **ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

The information required by this item is incorporated by reference to the information under the captions Security Ownership of Management and Certain Beneficial Owners and Equity Compensation Plan Information in our proxy statement for the annual meeting of shareholders to be held on January 18, 2012.

#### **ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

The information required by this item is incorporated by reference to the information under the captions Interests of Management and Others in Certain Transactions and Information Concerning the Board of Directors in our proxy statement for the annual meeting of shareholders to be held on January 18, 2012.

#### **ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

The information required by this item is incorporated by reference to the information under the captions Independent Registered Public Accountant Fees and Auditor Independence in our proxy statement for the annual meeting of shareholders to be held on January 18, 2012.



## PART IV

## ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

	Page Number in this Report
(a)(1) Index to Financial Statements	
<u>Consolidated Statements of Operations Years ended August 27, 2011, August 28, 2010 and August 29, 2009</u>	36
<u>Consolidated Balance Sheets August 27, 2011 and August 28, 2010</u>	37
<u>Consolidated Statements of Stockholders Equity and Comprehensive Income (Loss) Years ended August 27, 2011, August 28, 2010 and August 29, 2009</u>	38
<u>Consolidated Statements of Cash Flows Years ended August 27, 2011, August 28, 2010 and August 29, 2009</u>	39
<u>Notes to Consolidated Financial Statements</u>	40
<u>Report of Independent Registered Public Accounting Firm</u>	58
<u>Quarterly financial data for fiscal 2011 and 2010 (unaudited)</u>	59
(a)(2) Financial Statement Schedules	
All schedules are omitted because they are not applicable or the required information is shown in the consolidated financial statements or notes thereto.	
(a)(3) Exhibits	
3.1 Restated Articles of Incorporation of the Company.(1)	
3.2 Restated By-Laws.(1)	
3.3 Articles of Amendment of Restated Articles of Incorporation.(1)	
10.1 FSI International, Inc. 1997 Omnibus Stock Plan (as amended and restated November 2004).(2)	
10.2 Form of Incentive Stock Option Agreement for the FSI International, Inc. 1997 Omnibus Stock Plan, as amended.(3)	
10.3 Form of Incentive Stock Option Agreement for Outside Directors for the FSI International, Inc. 1997 Omnibus Stock Plan, as amended.(3)	
10.4 FSI International, Inc. 2008 Omnibus Stock Plan (as amended and restated January 2011).(5)	
10.5 Form of Incentive Stock Option Agreement for the FSI International, Inc. 2008 Omnibus Stock Plan, as amended. (filed herewith)	
10.6 FSI International, Inc. Employees Stock Purchase Plan (as amended and restated January 2011).(5)	
10.7 Management Agreement entered into as of March 28, 2008, by and between FSI International, Inc. and Donald S. Mitchell. (Identical Management Agreements were entered into on March 28, 2008 between the Company and each of Benno G. Sand, Patricia M. Hollister and John C. Ely. These Management Agreements have been omitted but will be filed if requested in writing by the Commission).(6)#	
10.8 Severance Agreement entered into as of March 28, 2008, by and between FSI International, Inc. and Benno G. Sand.(6)#	
10.9 Employment Agreement entered into as of March 28, 2008, by and between FSI International, Inc. and Donald S. Mitchell.(6)#	
10.10 Amended and Restated Summary of Terms of Employment entered into as of March 28, 2008 between FSI International and Donald S. Mitchell.(6)#	
10.11 Severance Agreement entered into as of March 28, 2008, by and between FSI International, Inc. and Patricia M. Hollister. (An identical Severance Agreement was entered into on March 28, 2008 between the Company and John C. Ely. This Severance Agreement has been omitted but will be filed if requested in writing by the Commission).(6)#	

- 10.12 Stock Purchase Agreement dated as of May 15, 2007 by and among FSI International, Inc., MBK Project Holdings Ltd., Chlorine Engineers Corp. Ltd., Yasuda Enterprise Development III Limited Partnership, Mizuho Capital Co., Ltd., Mr. Hideki Kawai, Mr. Takanori Yoshioka and Mr. Satoshi Shikami. (exhibits omitted)(4)
- 10.13 Incentive Compensation Plan.(7)#
- 21.0 Subsidiaries of the Company. (filed herewith)
- 23.0 Consent of KPMG LLP, independent registered public accounting firm. (filed herewith)
- 24.0 Powers of Attorney from the Directors of FSI International, Inc. (filed herewith)
- 31.1 Certification by Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (filed herewith)
- 31.2 Certification by Principal Financial and Accounting Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. (filed herewith)
- 32.1 Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (filed herewith)

# Identified exhibit is a management contract, compensation plan or arrangement.

- (1) Filed as an Exhibit to the Company's Registration Statement on Form S-3 filed with the SEC on March 30, 2010, SEC File No. 333-165785, and incorporated by reference.
- (2) Filed as an Exhibit to the Company's Registration Statement on Form S-8, filed by the Company on February 11, 2005, SEC File No. 333-122729 and incorporated by reference.
- (3) Filed as an Exhibit to the Company's Report on Form 8-K, filed by the Company on October 20, 2004, SEC File No. 0-17276 and incorporated by reference.
- (4) Filed as an Exhibit to the Company's Report on Form 10-Q for the quarter ended May 26, 2007, SEC File No. 0-17276 and incorporated by reference.
- (5) Filed as an Exhibit to the Company's Registration Statement on Form S-8, filed by the Company on April 5, 2011, SEC File No. 333-173310 and incorporated by reference.
- (6) Filed as an Exhibit to the Company's Report on Form 10-Q for the fiscal quarter ended March 1, 2008, SEC File No. 0-17276 and incorporated by reference.
- (7) Filed as an Exhibit to the Company's Report on Form 10-Q for the fiscal quarter ended February 26, 2011, SEC File No. 0-17276 and incorporated by reference.



**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

FSI INTERNATIONAL, INC.

By: /s/ Donald S. Mitchell  
Donald S. Mitchell, Chairman and

Chief Executive Officer

(Principal Executive Officer)

Dated: November 4, 2011

By: /s/ Patricia M. Hollister  
Patricia M. Hollister, Chief Financial Officer

(Principal Financial and Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons, constituting a majority of the Board of Directors, on behalf of the Registrant and in the capacities and on the dates indicated.

James A. Bernards, Director\*

Terrence W. Glarner, Director\*

Donald S. Mitchell, Director\*

David V. Smith, Director\*

Stan Yarbro, Director\*

\*By: /s/ Patricia M. Hollister  
Patricia M. Hollister, Attorney-in-fact

Dated: November 4, 2011

INDEX TO EXHIBITS

Exhibit	Description	Method of Filing
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