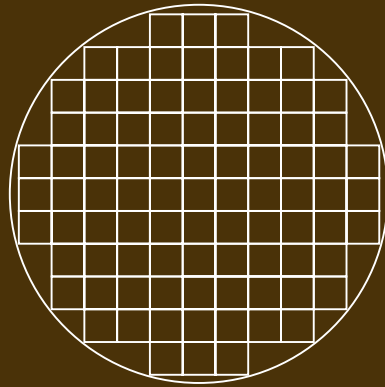


1999

# Silicon Valley Group

ANNUAL REPORT AND FORM 10-K



# Silicon Valley Group

Enabling integrated circuit manufacturers to win the productivity race by providing leading-edge technology products that maximize yield through innovative design is the driving force of Silicon Valley Group. Our mission is fulfilled when products are delivered and installed on time and top-of-the-line service and support are provided to help customers achieve their productivity objectives.

# We are prepared for growth.

a letter to our shareholders

## **AS THE SEMICONDUCTOR GROWTH CYCLE GAINS MOMENTUM, SVG IS WELL POSITIONED FOR THE FUTURE.**

As the semiconductor industry goes, so too does SVG. The recent industry downturn, which started in 1998 and continued into 1999, presented major hurdles for Silicon Valley Group and its customers. It particularly impacted SVG at a time when our lithography manufacturing capacity and other capabilities had been increased to take advantage of what had been predicted to be a period of unprecedented growth. Managing a downturn is no easy feat. Although our return to profitability in the fourth quarter of the fiscal year was not as vigorous as we would have liked, I am pleased to say that SVG has risen to the challenge. We focused on the long-term health of the Company with cash preservation and investments in research and development (R&D). Our business is cyclical in nature, and I believe that the current upward momentum we are experiencing in the industry is a very positive indicator for the future.

This was a very difficult year for SVG. Revenues in 1999 of \$474 million declined significantly from the prior year, and the Company recorded a net loss of \$25 million. However, for the fourth quarter of fiscal year 1999, we recorded sales of \$190 million, a 76% increase over fourth quarter fiscal year 1998 sales of \$108 million, and the Company returned to profitability with net income of \$1.6 million. Throughout the downturn, we maintained a strong balance sheet and cash position.

**Infrastructure Improvements Geared to Global Growth** Through expansion of marketing, customer service and support organizations and operational improvements that address the ability to more aggressively respond to customers' needs, SVG is prepared to support a rapid period of growth during the next several years. More importantly, our customers have seen the difference and recognized our efforts. That SVG was recently ranked number one in a customer's satisfaction survey comparing equipment suppliers and received two quality awards from customers is evidence of the success of these improvements. We are proud of these achievements and will continue to focus on customer satisfaction.

**Realizing International Growth Opportunities** A sense of urgency to penetrate new international markets was a driving force in the acquisition of Watkins-Johnson's Semiconductor Equipment Group. Completed in July 1999, the WJ acquisition brought Japan and other Asian markets as a destination for more than 50% of its systems, as well as a technology center in Japan that is a focal point for customer process demonstrations and sales and support activities. WJ's infrastructure and products were merged with SVG's Thermco products and together renamed Thermal Systems. SVG plans to leverage the unparalleled gapfill technology and the combined resources of the two groups to further address our customers' needs internationally and take advantage of market opportunities for our other products, particularly in Asia.

### **TECHNOLOGY IS ADVANCING AND SVG IS PREPARED TO ACCEPT THE CHALLENGE.**

The semiconductor industry faced opposing challenges in 1999 — how to contain costs without mortgaging future market opportunities. Many IC manufacturers opted to make equipment purchasing decisions based on current market conditions, which meant equipment buys often were based on short-term economics. SVG responded to this new challenge by investing in selected product extensions to reposition itself with a broadened, multi-product portfolio of solutions for critical and sub-critical semiconductor device circuit levels. Our company-wide product strategy continues to focus on customer requirements for viable, high-volume production solutions for cutting-edge logic applications, application-specific integrated circuits (ASICs) and dynamic random access memory (DRAM) chips.

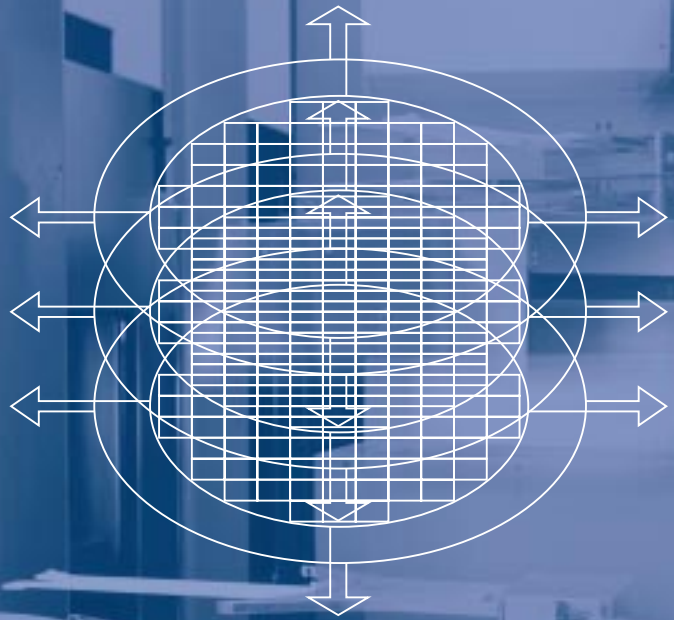
The slow pace of transition from 200 mm to 300 mm wafers was difficult for equipment suppliers who had already incurred development costs without the ability to recoup their investment. However, by mid-1999, when several major IC manufacturers answered the question about their 300 mm plans and helped put the industry back on a forward track, SVG was prepared. Across all divisions in fiscal year 1999, design teams had already begun to develop bridge tools — tools capable of working in both 200 mm and 300 mm environments.

In May 1999, Track Systems launched a 200 mm/300 mm coat/develop cluster system called ProCell™. This breakthrough product is aimed at providing customers with substantial productivity gains for several generations of chip manufacturing. With its patented Advanced Guidance System™ and hexagonal close-packed platform, ProCell is designed to meet the demand for a high-volume/high-yield lithography cluster system with unrivaled throughput. The new system has been well received publicly and Track Systems has already received its first order from a major European semiconductor manufacturer.

We are broadening  
the product portfolio.



MICRASCAN-III



# We are taking advantage of market opportunities.

Thermal Systems also pursued new market opportunities during 1999. The advantages of hot-wall thermal processing furnaces such as temperature control, low cost-of-ownership and process variety continue to secure the position of this technology as a proven production workhorse of IC manufacturing. Recognizing that customers who process large wafer loads with a complex mix of device production require shorter cycle times and need greater flexibility in running their fabs, the emergence of the rapid vertical processor furnace enabled these markets to be addressed.

Four years ago, Lithography Systems began development of a 0.6 numerical aperture (NA) 193 nm scanner to meet the needs of the market based on the industry roadmap that existed at that time. In 1999 it became apparent that the industry was delaying the transition from 248 nm tool sets. We had not yet completed the resist performance testing to demonstrate the capability of the Micrascan (MS) 193 nm tool, which is necessary to gain customer acceptance. As a result, four of the five participants in the 193 nm Development Program withdrew their support and orders from the program. However, by the fall of 1999, test results revealed superior performance on the 193 nm tool. This performance did not go unnoticed. One industry expert said, "I've seen some pretty stunning SEMs (scanning electron microscopy) of an SVG Micrascan 193...it may just be that they were waiting until they had it right" (The Chip Insider, VLSI Research). Bottom line: SVG has now positioned this tool with customers for the R&D work critical to building an industry infrastructure required to reach the next technology node. As momentum builds for the 193 nm tools that provide solutions not just at 130 nm but also the 100 nm node, SVG accelerated its high numerical aperture (HNA) 193 nm development efforts.

## **SVG IS TURNING TECHNOLOGY LEADERSHIP INTO MARKET LEADERSHIP.**

To take full advantage of the market opportunities now available, SVG began implementing its strategy to develop a high performance platform that will accommodate multiple optical systems — 248 nm, 193 nm and 157 nm — that are compatible with 200 mm and 300 mm wafers. This synergistic platform combines low cost-of-ownership and high throughput to provide market flexibility, which initially will be incorporated into our HNA 193 nm product offering. SVG's strategy is now starting to bear fruit as evidenced by a multi-unit order from a leading U.S. IC manufacturer for its HNA 193 nm tool and a high degree of interest from other customers.

This strategy is specifically designed to speed time-to-market and enable greater flexibility in meeting customers' changing needs. But most important, it sets the stage for SVG to follow technology leadership with market leadership.

**Helping Customers Win Means More than Technology** Technology alone may win customers' interest, but keeping customers means providing on-time delivery and award-winning support. Several major awards that highlighted progress in customer support were announced this year. This kind of recognition can be as important a gauge of progress as internal measuring systems. SVG also owes its customers, and the communities in which its products are manufactured and operated, a commitment to protecting and preserving the environment. SVG demonstrates its commitment to protect the environment by providing environmentally friendly product design, which allows semiconductor plants to reduce energy, water and chemical consumption, while increasing productivity. At SVG we believe that good environmental, health and safety policy is also good business.

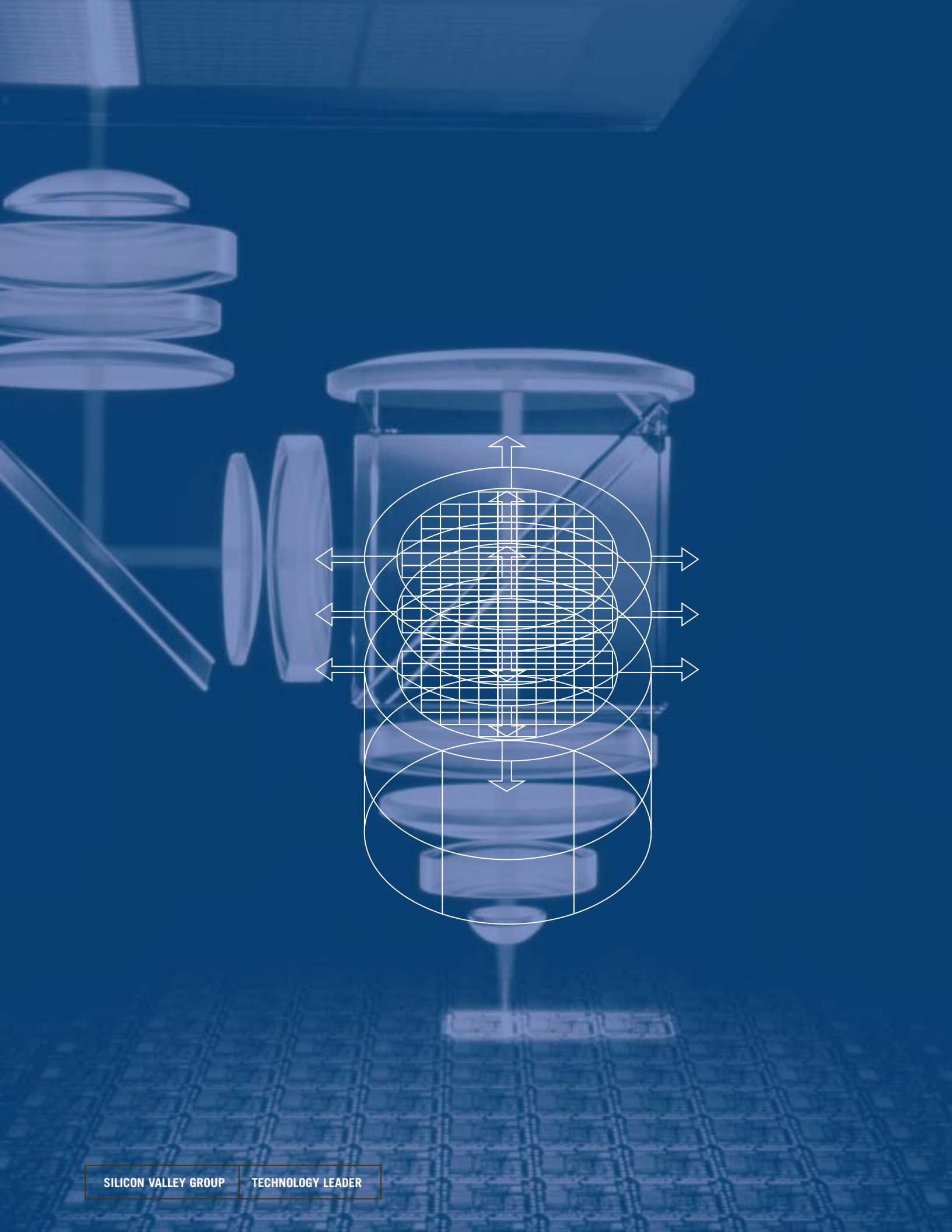
**Positioned for the Future** Strong cash management, sensible product development, and a timely strategic acquisition combined with an expanded worldwide infrastructure positions the Company better than at any time in the past to help our customers win and to win new customers. We are well aware of the challenges that lie ahead and are dedicated to improving profitability and expanding our customer base. We thank our loyal customers, employees and shareholders for staying the course during this very difficult year and encourage you to hold fast as we pursue an exciting future.

We are dedicated to  
improving profitability  
and expanding our  
customer base.



Papken S. Der Torossian  
Chairman and Chief Executive Officer  
Silicon Valley Group





SILICON VALLEY GROUP

TECHNOLOGY LEADER

## SVG'S INDUSTRY ROADMAP —

### LEADERSHIP AND A VISION FOR THE FUTURE

When SVG introduced its lithography roadmap, the industry was in the process of seriously evaluating five contenders for next-generation lithography. As competitors scrambled during 1999 to start 157 nm tool development and back extreme ultraviolet technology, the general consensus appears to be that SVG's roadmap is rapidly becoming the industry-accepted roadmap. The significance of this acceptance is becoming palpable as customers realize they need a cost-effective way to transition from the 130 nm technology node to the 100 nm, 70 nm, and 50 nm nodes and beyond.

By staying with SVG's roadmap and products, customers will enjoy high productivity, low cost of ownership chip manufacturing solutions for critical and sub-critical circuit levels for many years to come.

## COMMITMENT TO OUR CUSTOMERS

In a financially difficult year, SVG did not sacrifice its commitment to develop and support winning solutions. The Company dedicated 20% of its sales dollars to research and development in fiscal 1999. This level of support reinforces SVG's commitment to helping our customers to advance their products.

During the past fiscal year, our customers rewarded us with awards for outstanding service. For example, the STMicroelectronics Partners in Excellence Award went to Lithography Systems for its 1998 performance at the Rancho Bernardo, California, fab and Infineon Technologies' Supplier of the Year award went to SVG's Thermal Systems. As a company, SVG was ranked number one overall in a major U.S. IC manufacturer's survey when compared with other equipment suppliers in providing technical, sales and service support. A renewed commitment to customer focus means that customers can expect their chosen solutions to be delivered on-time and be globally supported by a dedicated staff.



# A winning platform

## BUILDING OPERATIONAL EFFICIENCY — KEY TO READINESS

Throughout SVG, key indicators of our readiness to take advantage of the market upturn are in place. During this fiscal year, cycle times for the Quarter Micron Lamp (QML) product family were reduced about 30% and those for the Micrascan III and III+ family about 20%.

Quality can be measured and applauded. This year our lithography operation was the recipient of the Connecticut Quality Innovation Improvement Award for improving its on-time delivery performance through significant adjustments to the production test process. The Company also won the Peninsula Conservation Center Foundation's Business Environmental Award for quality, environment, health and safety improvements in integrated circuit manufacturing.

## ACQUISITION SYNERGIES

SVG viewed the acquisition of the Watkins-Johnson Semiconductor Equipment Group as an opportunity to expand our existing pre-metal thermal processes to address more of our customers' needs. Additionally, the potential exists to take advantage of Watkins-Johnson's platform development for its single wafer tool APNext in the development of Thermal Systems' new single wafer product, which are tools designed to expand our market. The acquisition also enhances our market presence by providing an existing customer base in Asia. Finally, SVG acquired an award-winning customer service and support infrastructure that has won an industry Top 10 Customer Satisfaction Survey four out of the last five years.

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**SECURITIES AND EXCHANGE COMMISSION**  
**WASHINGTON, D.C. 20549**

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**FORM 10-K**

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(Mark One)

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

For the Fiscal Year Ended September 30, 1999\*

**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: 0-11348

**SILICON VALLEY GROUP, INC.**

(Exact name of Registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
Incorporation or organization)

**94-2264681**  
(IRS Employer  
Identification Number)

**101 Metro Drive, Suite 400, San Jose, California 95110**  
(Address of principal executive offices) (Zip Code)

**Registrant's telephone number, including area code: (408) 441-6700**

**Securities registered pursuant to Section 12(g) of the Act:**  
**Common Stock, \$.01 Par Value**

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

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

The aggregate market value of the voting stock held by persons other than those who may be deemed affiliates of the Registrant, as of November 26, 1999, was approximately \$386,227,325. Shares of common stock held by each executive officer and director and by each person who owns 5% or more of the outstanding common stock have been excluded in that such persons may under certain circumstances be deemed to be affiliates. This determination of executive officer or affiliate status is not necessarily a conclusive determination for other purposes.

The number of shares outstanding of the Registrant's Common Stock as of November 26, 1999 was 33,336,829.

\* See Part II, Item 8A. of this report for information regarding Registrant's fiscal year.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the following documents are incorporated by reference into the parts of this Form 10-K as indicated herein:

Proxy Statement for Annual Meeting of Stockholders to be held on  
February 23, 2000

Part III

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## PART I

The information in this report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements are subject to certain risks and uncertainties, including those discussed below that could cause actual results to differ materially from those described herein. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. Forward-looking statements are indicated by an asterisk (\*) following the sentence in which such statement is made. The Company undertakes no obligation to publicly release the results of any revisions to these forward-looking statements which may be made to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

### **Item 1. Business.**

Silicon Valley Group, Inc. (the “Company” or “SVG”) primarily designs, manufactures, markets and services semiconductor processing equipment used in the fabrication of integrated circuits. The fabrication of integrated circuits involves repeating a complex series of process steps to a semiconductor wafer. The three broad categories of wafer processing steps are deposition, photolithography and etching. SVG has three principal product groups which focus primarily on photolithography, photoresist processing, and deposition for oxidation/diffusion and low-pressure chemical vapor deposition (“LPCVD”) and with the acquisition of the Semiconductor Equipment Group of Watkins-Johnson Company, thermal processing products which address atmospheric pressure chemical vapor deposition (“APCVD”). In addition, a precision optics group supplies certain components for the Company’s photolithography products, government markets and lens systems to the cinematography industry. The Company’s products incorporate proprietary technologies and unique processes, and focus on providing process and product technologies and productivity enhancements to its customers. SVG works closely with its existing and potential customers in the development of new systems and technologies and supports its products through a network of worldwide service and technical support organizations.

Herein the Company refers to its photolithography exposure products as SVG Lithography Systems, Inc. “SVGL” products, its photoresist processing products as “Track” products and its oxidation/diffusion, LPCVD and its newly acquired APCVD products from Watkins-Johnson Company as “Thermal” products.

### **Industry Background**

Continuous improvements in semiconductor process and design technologies have led to the production of smaller, more complex and more reliable semiconductor devices at a lower cost per function. As performance has increased and size and cost have decreased, the demand for semiconductors has expanded in computer systems, telecommunications systems, automotive products, consumer goods and industrial automation and control systems. Semiconductor content as a percentage of system cost has also increased. The Company believes that these long-term trends will continue and will be accompanied by a growing demand for semiconductor production equipment that can produce advanced integrated circuits in high volumes with a low cost of ownership.\*

The rapid development of advanced semiconductor applications requires semiconductor manufacturers to continually improve their core technology and manufacturing capabilities to remain competitive within the industry. As a consequence, semiconductor manufacturers demand increasingly sophisticated, highly productive and cost effective processing equipment from semiconductor equipment suppliers. The increasing diversity and complexity of semiconductor products, the demands of technological change and the costs associated with keeping pace with industry developments have contributed to the emergence of cooperative development and manufacturing alliances both amongst semiconductor manufacturers and between semiconductor manufacturers and semiconductor equipment suppliers. The Company believes it is essential to have customer alliances to provide access to valuable product and process technologies. These factors result in customers concentrating their business with a small number of key suppliers.

The semiconductor industry into which the Company sells its products is highly cyclical and has, historically, experienced periodic downturns that have had a severe effect on the semiconductor industry’s demand for semiconductor processing equipment. As a result of the Asian economic crisis which began in 1997, an oversupply of certain semiconductor products, the impact of low cost personal computers, and various other factors, semiconductor manufacturers reduced planned expenditures and cancelled or delayed the construction of new fabrication facilities. This slowdown in demand began to impact the Company during the first quarter of fiscal 1998 and continued to impact the Company throughout fiscal 1999.

The slowdown in demand resulted in the Company experiencing lower new customer orders, customer deferrals of scheduled equipment delivery dates and, to a lesser extent, customer order cancellations. Last year's lower bookings, order rescheduling and cancellations, have caused sales and net income during fiscal 1999 to decline from prior years amounts. Although, the Company has experienced a modest improvement in new bookings, as during the second half of fiscal 1999 the Company recorded new bookings of \$324,213,000 up from new bookings of \$254,444,000 and \$237,451,000 during the first half of fiscal 1999 and the second half of fiscal 1998, respectively. There can be no assurance that the dollar amount of new bookings will continue to increase.\* There can be no assurance that the Company will not experience further customer delivery deferrals, additional order cancellations or a prolonged period of customer orders at reduced levels, any or a combination of which would have a material adverse effect on the Company's business and results of operations.\*

## Strategy

The Company's objective is to strengthen its position as a leading worldwide semiconductor equipment supplier that offers a broad line of technologically advanced products. The Company's strategy incorporates the following key elements:

- *Future Technological Innovation.* The Company is committed to developing new products, improving processes and enhancing existing products through substantial investment in research and development. In this regard, the Company has developed a roadmap for the development of next generation lithography technology well into the next decade. The Company's products incorporate proprietary technologies in photolithography, control software, optics and particulate control and unique processes focusing on providing process and product technologies and productivity enhancements to customers. Additionally, the Company works with universities and laboratories to leverage new concepts for its advanced projects.
- *Customer Commitment.* The Company's objective is to strengthen its position as a leading worldwide semiconductor equipment supplier by offering a broad line of technologically advanced products. The Company works closely with its existing and potential customers, industry consortia and research institutions to improve current products and processes and to define new product development opportunities. These efforts enable the Company to participate in the development of new technologies, to influence the design of new fabrication processes and to position it as a principal supplier for volume equipment orders. The Company believes that cooperative working relationships with leading semiconductor manufacturers are critical to ensuring that its products are designed in conjunction with the development of the semiconductor manufacturers' advanced process requirements.
- *Continued Operational Efficiency and Improvement.* The industry requires that equipment suppliers provide cost-effective products that are based on extendible technology. Cost of ownership and the ability to satisfy customer delivery requirements are critical ingredients in the selection process for advanced equipment. To address these issues, the Company has in the past and is continuing to respond to this issue by expanding certain of its facilities and deploying capital for manufacturing and test equipment to respond to the long term requirements of the semiconductor industry. The Company continues to implement programs to improve operational efficiency to improve the effectiveness of its material procurement, reduce manufacturing cycle times and improve production methods and processes to gain additional efficiencies.
- *Expansion of Its Customer Base.* The Company is committed to expanding its worldwide customer base to address the needs of the global semiconductor market. Continuous improvement programs and timely introduction of new technology tools are key elements of the Company's strategy. The Company remains focused on leveraging the strength of its products and customer base to satisfy the diverse requirements of the Logic, Memory and ASIC markets on a worldwide basis.

## SVG Lithography Systems, Inc. (SVGL)

SVGL designs, manufactures, markets and services advanced photolithography exposure systems. Photolithography is one of the most critical and expensive steps in integrated circuit fabrication, representing approximately one-third or more of the fabrication cost. Consequently, integrated circuit manufacturers focus on obtaining advanced photolithography equipment to help them produce critical layers for increasingly complex devices reliably, efficiently and cost-effectively.

In the photolithography step of the fabrication process, the integrated circuit patterns are projected through masks, or reticles, onto the silicon wafers. As semiconductors have become more complex, the patterns have become finer, with line widths as narrow as 0.15 micron and below in many of today's more advanced integrated circuits. As the patterns become

finer, photolithography exposure systems must be capable of projecting the patterns through the masks with ever-finer resolution. The resolution capability of a photolithography exposure system is a function of numerical aperture (a measure of its light gathering characteristics) and the wavelength of the light used in exposure. With the advancement of photolithography technology there has come a trend toward the reduction in wavelength from G-line (436-nanometer) to I-line (365-nanometer) to DUV (248 and 193-nanometer) and the increase in numerical aperture from 0.2 to approximately 0.7. During fiscal 1999, the Company entered into an agreement with Intel Corporation for the development of 157-nanometer lithography technology capable of producing line widths as fine as .10 microns.

Historically, there have been two major approaches to photolithography exposure systems: full field scanning projection aligners (“scanners”) and refractive steppers (“steppers”). Scanners project a full scale mask image onto a moving full wafer, while steppers sequentially expose a small section of a wafer in a stepped sequence of exposures, but do so by reducing the size of a mask image by several fold (typically 5 times). Thus, scanners offer large exposure fields while steppers offer masks that are easier to make and have a lower cost. These strengths are combined in the step-and-scan system, a technology pioneered by SVGL.

*Micrascan.* The Company believes that its Micrascan photolithography step-and-scan exposure system provides the increased resolution required for current advanced logic and memory devices and for succeeding generations of complex, fine geometry integrated circuits through its use of DUV lamp or laser light source and unique projection optics design. Micrascan overcomes the line width limitations of steppers over a large exposure field by combining the elements of both steppers and scanners into the Micrascan’s step-and-scan technology.\*

The Micrascan combines advantages of scanning projection aligners and steppers by projecting a light through a very narrow slit and scanning a portion of the wafer, then “stepping” to another portion of the wafer and repeating the process as necessary. Each scan has the capability to expose a large segment of the wafer. The large exposure field enables Micrascan to fabricate larger devices in a single scan than steppers, thus avoiding the necessity of “stitching” a circuit together through two different exposures, and depending on the size of the chip provides the ability to expose more than one device in an exposure field. In addition, Micrascan continuously modifies the position of the wafer surface during the scan, using its on-the-fly focus system to keep the wafer in the optimal focal plane, thus providing a larger usable depth of focus. The larger the usable depth of focus field is, the more tolerant of variations in the wafer surface the equipment will be. The Company believes Micrascan’s greater tolerance of wafer surface variations can reduce the number of defective devices on a wafer, thereby contributing to higher yields.\* It further believes that scanning across the field instead of exposing the entire field at one time also enables Micrascan to achieve greater uniformity of resolution across the entire exposure field and contributes to higher yields of faster devices.\*

The Company believes that SVGL has substantial technological expertise and process knowledge in developing deep ultraviolet (“DUV”) step-and-scan photolithography systems.\* SVGL has developed internal capability to design and fabricate optical lenses, mirrors and coatings. This includes a combination of purchased and proprietary optical metrology using phase measuring interferometry to precisely measure and test the optical elements it produces. Micrascan incorporates both mirrors and lenses in its optical system, which the Company believes allows for an optical projection system that is less sensitive to environmental variants and accommodates the use of light sources with broader spectral bandwidth (than refractive optics), with the additional benefits of reduced operational cost and increased reliability.\*

In addition to the optical system technology described above, SVGL has developed certain proprietary mechanical systems incorporated in the Micrascan to control the position of the wafer and the reticles prior to and during the wafer exposure step. The Company believes that these servo controlled systems contribute to the Micrascan’s ability to scan the exposure field at high speeds with no substantial loss of resolution, thereby increasing the throughput capability of the machine.\*

The Company believes that the photolithography exposure equipment market is one of the largest segments of the semiconductor processing equipment industry and that SVGL’s Micrascan family of photolithography systems are currently the most technically advanced step-and-scan machines shipping in multiple quantities to global semiconductor manufacturers.\* The Micrascan QML lamp-based systems and Micrascan III laser-based systems, each capable of printing sub .30 micron line widths, sell for up to approximately \$4,300,000, depending upon configuration. Micrascan III+ capable of producing line widths of sub .18 micron sells for approximately \$6,000,000. The Micrascan 193-nanometer system capable of producing line widths of sub .15 micron sells for approximately \$10,500,000 depending on configuration. Although the Company specifies that its systems produce certain line widths, it is commonplace that the combination of the tool’s robustness and the customer’s process technology achieves finer line widths than those specified.

*Uncertain Market for Micrascan Products.* The Company believes that the photolithography exposure equipment market is one of the largest segments of the semiconductor processing equipment industry.\* To address the market for advanced photolithography exposure systems, the Company has invested and expects to continue to invest substantial resources in SVGL's Micrascan technology and its family of Micrascan DUV step-and-scan photolithography systems, which is currently capable of producing line widths of .15 micron and below and which the Company believes eventually will be capable of producing line widths of .10 micron and below.\* The development of a market for the Company's Micrascan step-and-scan photolithography products will be highly dependent on the continued trend towards finer line widths in integrated circuits and the ability of other lithography manufacturers to keep pace with this trend through either enhanced technologies or improved processes.\* The Company believes DUV lithography is required to fabricate devices with line widths below 0.3 micron.\* Semiconductor manufacturers can purchase DUV steppers to produce product at .25 micron line widths. However, the Company believes that as devices increase in complexity and size and require finer line widths, the technical advantages of DUV step-and-scan systems, as compared to DUV steppers, will enable semiconductor manufacturers to achieve finer line widths with improved critical dimension control which will result in higher yields of faster devices.\* The Company also believes that the industry transition to DUV step-and-scan systems has accelerated in calendar 1999 and that advanced semiconductor manufacturers are beginning to produce both critical and to some degree sub-critical layers of semiconductor devices.\* Currently, competitive DUV step-and-scan equipment capable of producing .25 micron line widths and below is available in limited quantities from three competitors.\* Further, if manufacturers of DUV steppers are able to further enhance existing technology to achieve finer line widths sufficiently to erode the competitive and technological advantages of DUV step-and-scan systems, or other manufacturers of step-and-scan systems are successful in supplying sufficient quantities of product in a timely manner that are technically equal to or better than the Micrascan, demand for the Micrascan technology may not develop as the Company expects.\*

The Company believes that advanced logic devices, DRAMs and ASICs will require increasingly finer line widths.\* Consequently, SVGL must continue to develop advanced technology equipment capable of meeting its customers' current and future requirements while offering those customers a progressively lower cost of ownership.\* In particular, the Company believes that it must continue its development of future systems capable of printing line widths finer than .10 micron and processing 300mm wafers.\* Any failure by the Company to develop the advanced technology required by its customers at progressively lower costs of ownership and supply sufficient quantities to a worldwide customer base could have a material adverse impact on the Company's financial condition and results of operations.\*

The Company believes that for SVGL to succeed in the long term, it must sell its Micrascan products on a global basis.\* The Japanese and Pacific Rim markets (including fabrication plants located in other parts of the world which are operated by Japanese and Pacific Rim semiconductor manufacturers as well as foundries located primarily in Taiwan) represent a substantial portion of the overall market for photolithography exposure equipment. To date, the Company has not been successful in penetrating either of these markets. (See "Importance of the Japanese and Pacific Rim Markets").

*Micralign.* SVGL also sells a family of scanning projection aligners known as "Micralign." The most advanced product in this family, the Micralign 700, is used primarily in the production of semiconductor devices with minimum feature sizes above 1.25 microns, or in the fabrication of less critical layers within more sophisticated semiconductor devices. Micralign products are a mature product family and sales of Micralign products have declined in recent years as steppers have supplanted scanning projection aligners. The Company anticipates that such sales will continue to decline.\* A large installed base of Micralign systems exists throughout the world and a majority of SVGL's Micralign related revenues is derived from servicing that installed base and the sales of spare parts. The list price of the Micralign 700 is approximately \$1,350,000.

### **Track Systems (Track)**

Track designs, manufactures, markets and services photoresist processing equipment which performs all the steps necessary to process semiconductor wafers prior to photolithography exposure, including cleaning, adhesion promotion and photoresist coating, and which performs all the steps required to treat wafers after photolithography exposure prior to etching, including developing and baking. As photoresist processing technology has evolved, the Company has developed increasingly advanced products for this market, which are capable of handling integrated circuits with line widths as narrow as 0.18 micron. Each product line includes the principal processing capabilities described above and is generally sold in customer-specified configurations that can include specially engineered features and capabilities. All Track products are available in fully automated cassette-to-cassette configurations either as stand-alone processing stations or as in-line

integrated manufacturing systems. The equipment is modular in design to allow configuration to customer requirements. Each semiconductor manufacturer may require certain of the processing stations to effect its proprietary or specialized processes.

As a result of being able to supply its customers with both SVGL's Micrascan photolithography systems and Track's photoresist processing products, the Company believes it offers the only clustered solution manufactured by a single supplier. Additionally, Track's 90 Series is designed to interface with all other lithography exposure products, regardless of the manufacturer.

Track's product lines correspond to the development of successive generations of wafer processing technologies. In general, it has been the Company's experience that introduction of new Track products has been followed by lower order levels for older products.

*ProCell.* Announced in June 1999, the ProCell is designed for 200-mm advanced fabrication processes with line widths of .18 micron and beyond. The ProCell, which can process more than 40 wafers simultaneously offers scalability from 200-mm to-300-mm wafers and significant productivity improvement for the coat and develop process through the use of ProCell's symmetrical cluster configuration. The ProCell has enhanced reliability, uniformity in process results and serviceability due to the use of a single software platform, cell based design and the use of isolated process and coat environments. Prices for the ProCell range from approximately \$2,200,000 to \$3,500,000.

*90 Series.* The 90 Series, the 90-S and the 90-SE photoresist processing systems are designed for use in fabrication processes for integrated circuits with line widths as narrow as 0.25 micron, such as is required for 64 megabit DRAMs. The 90 Series incorporates a proprietary wafer transfer system to increase throughput and provides features allowing it to interface with factory automation systems, such as those using automated guided vehicles. The 90 Series can process wafers up to eight inches in diameter. The 90-S and the more recent 90-SE offer improved cost of ownership through increased productivity and a smaller floor space requirement. Prices of the 90 Series range from approximately \$650,000 to \$1,700,000.

*8800 Series.* The 8800 Series is designed to meet market needs for photoresist contamination control and photoresist processing down to 0.8 micron line widths. The 8800 Series incorporates such automation features as beltless wafer handling, compatibility with low contamination wafer storage and movement techniques, advanced software and communications capabilities and certain process control improvements. The 8800 Series can process wafers from three to six inches in diameter. The 8800 series is a mature product and sales have declined in recent years. The Company anticipates that such sales will continue to decline.\* Prices of the 8800 Series range from approximately \$200,000 to \$550,000.

### **Thermal Systems (Thermal)**

Thermal Systems product line includes large batch thermal processing products which address the oxidation/diffusion and LPCVD steps of the semiconductor fabrication process, and with the acquisition of the Semiconductor Equipment Group of Watkins-Johnson Company, thermal processing products that deposit thin dielectric films by using the process of atmospheric-pressure chemical-vapor-deposition ("APCVD"). Thermal products are used for a broad range of processing applications required in the fabrication of most semiconductor devices, including growing insulating layers on the wafers, diffusing dopants into the silicon structure and depositing insulating or conducting films on the wafer surface. Thermal's products incorporate proprietary technology the Company has developed or acquired in the areas of thermal control, gas handling, particle control and automated wafer handling.

There are two major configurations of oxidation/diffusion and LPCVD processing equipment, commonly referred to as vertical and horizontal, corresponding to the orientation of their reaction chamber(s). Vertical processing systems represent an increasing portion of the market for oxidation/diffusion and LPCVD processing equipment. Vertical reactors generally consist of a single, fully automated cylindrical reaction chamber, individually controlled by a dedicated computer control system. Vertical systems generally provide greater process uniformity and lower particle contamination than do horizontal systems, due to improved thermal control and an increased ability to maintain environmental integrity, thereby achieving higher yields in wafer processing. Additionally, vertical systems provide more flexibility in manufacturing configurations. Horizontal thermal processing systems, which are typically much larger and less automated than vertical reactors, were the standard of the semiconductor processing equipment industry and are still used for a broad range of processes.

*Rapid Vertical Processor—300 ("RVP-300").* Announced in 1997, the RVP-300 is the latest addition to the vertical furnace product line. RVP-300 is designed for processing of 300mm (12 inch) wafers addressing requirements for 0.18



micron technology and beyond. The design of RVP-300 focuses on maximizing productivity and throughput. This is done by utilizing features such as fast temperature ramp up and ramp down capability, Model Based Temperature Control (MBTC) for optimized temperature control across the wafer, and a dual boat configuration. Initial shipments of the RVP-300 occurred in the second quarter of fiscal 1998. Prices of the RVP-300 range from \$900,000 to \$1,500,000, depending on configuration.

*Series 9000 Rapid Vertical Processor ("RVP").* Introduced in 1996, the RVP is based on the *Advanced Vertical Processor ("AVP")* platform, processes both eight-inch and six-inch wafers and meets .25 micron technology requirements. The RVP features a proprietary and patented design that enables it to ramp up and ramp down temperatures anywhere between twice and ten times as fast as the AVP and offers faster throughput and tighter junction depth control for critical anneals. By utilizing the AVP platform, the Company believes that the RVP, which incorporates key features of the AVP, such as 16-cassette wafer handling and model based temperature control (MBTC), offers the high reliability of the established AVP product line. The typical price range of an RVP system is \$1,000,000 to \$1,200,000, depending on process configuration.

*Series 8000 Advanced Vertical Processor ("AVP").* Initially shipped in September 1992, the AVP is a vertical furnace designed to meet the eight and six inch wafer requirements of sub-.50 micron processing. The Series 8000 single tube systems include advanced process control, data acquisition software, advanced automation, a proprietary process chamber design and an option for atmospheric control within the wafer handling area. Key features of the AVP system include storage capacity for sixteen 25-wafer cassettes (400 wafers), and model based temperature control (MBTC) for accurate wafer temperature regulation. The AVP system is designed to offer customers a low cost of ownership, through high productivity and a low square footage requirement. The typical price range of an AVP system is \$500,000 to \$1,200,000, depending on process configuration.

*Vertical Thermal Reactor ("VTR").* Thermal's VTR processes wafers from 100mm to 200mm in diameter. It operates under computer control, providing specialized process recipe introduction, cassette-to-cassette automation, monitoring of critical system functions and automated loading of wafers into the reaction chamber. In general, the VTR offers comparable reliability, lower contamination and better process uniformity than horizontal reactors. The VTR can be installed through-the-wall in a customer's clean room facility and is compatible with industry standard software interfaces. The VTR *7000PLUS*, in comparison to earlier versions of VTR's, offers improved process control, uniformity, reduced particle levels, higher throughput, internal storage capabilities and the industry's standard mechanical interface (SMIF). Typical prices for the Company's VTR products range from approximately \$600,000 to \$900,000.

*Horizontal Processing Systems.* The typical horizontal system consists of four separately controlled cylindrical reaction chambers which are mounted horizontally, one directly above the other. Horizontal systems are a mature product family. Sales of these systems have been declining in recent years, as semiconductor manufacturers have increasingly installed vertical reactors in their newer fabrication facilities and the Company expects this trend to continue.\* However, the Company believes that manufacturers of less complex devices will continue to have some need for horizontal processing systems for the foreseeable future, but at successively declining rates.\* In addition, the existing installed base of horizontal processing systems enables the Company to generate revenues through the sale of spare parts and upgrades. Prices for horizontal systems range from approximately \$400,000 to \$900,000.

The Company's ("APCVD") products acquired from Watkins-Johnson Company utilize a propriety approach to the APCVD process. The substrates are transported under injectors on a continuously moving conveyor belt through a resistance heated muffle. This approach allows high deposition rates with a simpler reactor design yielding higher reliability operations and high wafer throughput.

*1500 System.* The 1500 APCVD system processes 200mm wafers addressing design-rule fabrication capability of 0.15 micron. It offers low cost of ownership with a new process muffle design and an improved MonoBlok injector assembly resulting in improved reliability, performance and serviceability through enhanced film uniformity, reduced consumables, improved system availability and ultra-low film metal levels. The 1500 system provides both doped and undoped deposition of TEOS based silicon dioxide and can be utilized in a broad range of dielectric film applications for both Logic and Memory manufacturing requirements. Typical prices for the 1500 System range from approximately \$2,200,000 to \$2,500,000 depending on process configuration.

*1000 System.* The 1000 APCVD system offers either hybrid or TEOS reactant processes and is specifically designed for high-productivity on 200mm wafer processing lines. The 1000 system provides both doped and undoped deposition of TEOS based silicon dioxide and can be utilized in a broad range of dielectric film applications for both Logic and Memory

manufacturing requirements. Typical prices for the 1000 System range from approximately \$1,500,000 to \$2,200,000 depending on process configuration.

*999 Systems.* The 999 and TEOS999 APCVD systems are for production lines utilizing between 100mm to 150mm wafers and are capable of simultaneous processing two wafers in parallel. Both systems offer doped and undoped silicon dioxide. Typical prices for the 999 System range from approximately \$1,500,000 to \$2,300,000 depending on process configuration.

## Customers

The Company's customer base includes companies that manufacture semiconductor devices primarily for sale to others and companies that manufacture semiconductor devices primarily for internal use. Repeat sales to existing customers represent a significant portion of the Company's processing equipment sales. The Company believes that its installed customer base represents a significant competitive advantage.\* By working closely with its established customer base, the Company is able to identify new product development opportunities. The Company's customers during fiscal 1999 included the following:

IBM	Microchip Technology
Intel	Motorola
LSI Logic	Philips Semiconductor
Maxim	ST Microelectronics

The Company relies on a limited number of customers for a substantial percentage of its sales. In fiscal 1999, Intel represented 56% of the Company's net sales with the Company's five largest customers accounting for 74% of net sales. For fiscal 1998, Intel, IBM and Motorola represented 40%, 17% and 13%, respectively, of sales and the Company's largest five customers represented 76% of sales. During fiscal years 1999 and 1998, no other customer represented more than 10% of net sales for the Company. In fiscal 1999 and 1998, Intel represented a substantial portion of the total sales of both Track and SVGL products with Intel representing approximately 78% of SVGL's fiscal 1999 net sales. The loss of a significant customer (and in particular the loss of Intel as a Track or SVGL customer — See "Manufacturing and Raw Materials"), a delay in shipment due to customer rescheduling or any substantial reduction in orders by a significant customer, including reductions in orders due to market, economic or competitive conditions in the semiconductor industry, would adversely affect the Company's business and results of operations.\*

## Marketing, Sales and Service

The Company markets and sells its products primarily to independent manufacturers of semiconductor devices and computer, telecommunications and other companies that manufacture semiconductor devices for their own use. The market for the Company's products is worldwide. The Company sells its products in the United States principally through its direct sales organization. The Company sells its products overseas through a direct sales staff, independent distributors and independent representatives. The following table sets forth the Company's revenues by geographic area as a percentage of net sales for the three fiscal years ended September 30:

	Years Ended September 30,		
	1997	1998	1999
United States	72%	65%	68%
Europe	18	31	26
Pacific Rim	10	4	6

Reliability, which is commonly measured in up-time and mean time between failure, and performance are increasingly important factors by which customers evaluate the potential suppliers of sophisticated processing systems. The Company believes that its field service and process support capabilities are major factors in its selection as an equipment supplier. Increasingly, semiconductor manufacturers are requiring seven-day, around the clock, on site or on call support. To meet this need, the Company continues to enhance its training programs and deploy spare part inventories at both customer sites and regional field depots. Service personnel are based in field offices throughout the United States, Western Europe, Japan and the Pacific Rim and increasingly on site at particularly large customer locations.

The Company warrants its products against defects in design, materials and workmanship, generally for periods ranging from one to two years.

### **Backlog**

At September 30, 1999 and 1998, the Company had a backlog of approximately \$357,455,000 and \$254,129,000, respectively. The Company includes in backlog only those orders to which a purchase order number has been assigned by the customer and for which delivery has been specified within 12 months. Such orders are subject to cancellation by the customer with limited charges. Because of the possibility of customer changes in delivery schedules, cancellation of orders and potential delays in product shipments, the Company's backlog as of any particular date may not be representative of actual sales for any succeeding period. As a result of the slow down in demand which began to impact the Company during the first quarter of fiscal 1998 and continued to impact the Company through out fiscal 1999, the Company has received customer deferrals and order cancellations of product with scheduled delivery dates which resulted in reduced levels of shipments during these periods. There can be no assurance that the Company will not in the future continue to experience customer delivery deferrals, order cancellations or a prolonged period of customer orders at reduced levels, any or a combination of which would have an adverse effect on its operating results.\*

### **Research, Development and Related Engineering**

The market served by the Company is characterized by rapid technological change. Accordingly, the Company's product and process development programs are devoted to the development of new systems and processes, including new generations of products for existing markets, enhancements and extensions of existing products and custom engineering for specific customers. The Company believes that its future success will depend upon its ability to continue to enhance its existing products and their process capabilities and to successfully develop, introduce and manufacture new and enhanced products and processes which satisfy a broad range of customer needs and achieve market acceptance.\* Accordingly, the Company works closely with semiconductor manufacturers, industry consortia, and research institutions to respond to the industry's evolving product and process requirements. The Company's research staff collaborates with key customers in order to evaluate designs, specifications and prototypes of the Company's new products.

The Company believes that in selecting a photolithography equipment manufacturer, customers look for a supplier with a long-term product development strategy and the ability to fund that development since photolithography exposure equipment can represent a substantial portion of the equipment cost of a fabrication facility. Semiconductor manufacturers may be unwilling to rely on a relatively small supplier, such as the Company, for a critical element of the fabrication process if they believe that the Company does not have sufficient capital to implement its product development strategy. The Company depends in part on external sources to fund its photolithography development efforts.

During fiscal 1996, the Company entered into agreements with certain customers (the "Participants") whereby each agreed to assist in funding the Company's development of an advanced technology 193-nanometer Micrascan system. In exchange for such funding, each Participant received the right to purchase one such system and, in addition, received a right of first refusal (ratable among such Participants) to all such machines manufactured during the first two years following the initial system shipments. For each initial system ordered, each Participant agreed to fund \$5,000,000 in such development costs. The agreements call for each Participant to pay \$1,000,000 of initial development funding and four subsequent payments of \$1,000,000 upon the completion of certain development milestones. The Participants may withdraw from the development program without penalty, but payments made against completed development milestones are not refundable and all rights to future equipment are forfeited. At September 30, 1999, the Company had received and recognized \$20,000,000 in funding from program Participants against research and development expenditures. Three competitors of the Company have either announced the development of, or have shipped 193-nanometer products. In June 1999, certain Participants decided that their product needs have changed for initial 193-nanometer machines and have withdrawn from the program and chosen to use or are evaluating other solutions. At September 30, 1999, the Company's obligations under these agreements are complete and no additional funding is expected or required from the Participants.\* As a result, the Company expects to use its own funds to continue development of an advanced technology 193-nanometer Micrascan system, which will result in an increase in the Company's research and development expenses and a decrease in the Company's operating income.\*

In May 1999, the Company entered into an agreement with Intel Corporation ("Intel") for the development of 157-nanometer lithography technology. This agreement obligates the Company among other things to develop and sell to Intel a

predetermined number of initial tools. Intel has agreed to provide advanced payments for the development and manufacture of these machines, based upon predetermined milestones. Separately, Intel has invested approximately \$15,000,000 in the Company in the form of a purchase of Series 1 Convertible Preferred Stock (see Note 11 to the Consolidated Financial Statements). The Company is obligated to dedicate a certain amount of its 157-nanometer unit production output to Intel. The Company is required to use the proceeds from the Series 1 Preferred investment and funds received under the agreement for the development of technology for use on 157-nanometer lithography equipment. There can be no assurance that the Company will be successful in developing 157-nanometer technology or will be able to manufacture significant quantities of machines to satisfy its obligations to Intel or other customers.\* There is no assurance that the Company will receive all funding which it currently anticipates under its agreement with Intel.\* If the Company were required to use its own funds, its research and development expenses would increase and its operating income would be reduced correspondingly.\*

The Company anticipates that it will need to continue to make substantial research and development expenditures, particularly in its photolithography products, in order to remain competitive in the semiconductor equipment industry. There is no assurance that the Company will receive all funding which it currently anticipates or that it will be able to obtain future outside funding beyond that which it is currently receiving. If the Company were not able to secure additional external funding, its new product development and product enhancement efforts would either be impaired or would have a material adverse effect on the Company's results of operations.\*

In connection with the Company's acquisition of SVGL in 1990, SVGL received an equity investment and research and development funding commitments for Micrascan from IBM. Under the terms of the related research and development agreement, SVGL owed IBM certain royalties based on future operating results. During the second quarter of fiscal 1997, the Company satisfied its obligation, recognized an expense of \$32,582,000, which represented royalties related to products currently under development, and recorded a prepayment of \$5,418,000, which represented royalties related to existing products which are being amortized through fiscal 2000.

The Company has historically devoted a significant portion of its personnel and financial resources to research and development programs. For fiscal years 1999, 1998, and 1997, total research and development expenditures were approximately \$98,000,000, \$99,000,000, and \$82,000,000, respectively, of which approximately \$3,000,000, \$12,000,000, and \$8,000,000, respectively, was funded by outside parties. Substantially all development funding received by SVGL has been for the development of its Micrascan technology and systems. During prior years, the majority of development funding was received from the industry consortium of semiconductor manufacturers, SEMATECH. In fiscal 1999, 1998 and 1997 the funding was received primarily from the Participants for the development of the advanced technology 193-nanometer system.

## **Competition**

The semiconductor equipment industry is intensely competitive. The Company faces substantial competition both in the United States and other countries in all of its products. The Company's competitors include Tokyo Electron, Ltd. ("TEL") and DaiNippon Screen Mfg. Co., Ltd. in photoresist processing equipment; TEL and Kokusai Electric Co., Ltd. in oxidation/diffusion, LPCVD equipment; Applied Materials and Quester in its newly acquired APCVD products from Watkins-Johnson; and Nikon, Canon, ASM Lithography and other suppliers in photolithography exposure equipment, and projection aligners. The trend toward consolidation in the semiconductor processing equipment industry has made it increasingly important to have the financial resources necessary to compete effectively across a broad range of product offerings, to fund customer service and support on a worldwide basis and to invest in both product and process research and development. Significant competitive factors include technology and cost of ownership, a formula which includes such data as initial price, system throughput and reliability, use of consumables and time to maintain or repair. Other competitive factors include familiarity with particular manufacturers' products, established relationships between suppliers and customers, product availability and technological differentiation. Occasionally, the Company has encountered intense price competition with respect to particular orders and has had difficulty establishing new relationships with certain customers who have long-standing relationships with other suppliers. The Company believes that outside Japan and the Pacific Rim it competes favorably with respect to most of these factors.\* (See "Importance of Japanese and Pacific Rim Markets".)

Many of the Company's competitors are Japanese corporations. Although the economic conditions in Asia are improving, the Company believes that an oversupply of equipment from certain Japanese competitors may continue to cause more severe price competition in its non-Asian markets.\* To compete effectively in these markets, the Company may be

forced to reduce prices, which could cause further reduction in net sales and gross margins and, consequently, have a material adverse effect on the Company's financial condition and results of operations.\*

Certain of the Company's existing and potential competitors have substantially greater name recognition, financial, engineering, manufacturing and marketing resources and customer service and support capabilities than the Company. Additionally, the Company is a relative newcomer in the commercial photolithography exposure market. Nikon, and to a lesser extent Canon, have long established relationships as suppliers of photolithography equipment to most of the semiconductor manufacturers. Although the Company has supplied Track and Thermal equipment to many of these customers, it has not previously sold meaningful quantities of Micrascan photolithography equipment to most of them.

The Company's competitors can be expected to continue to improve the design and performance of their current products and processes and to introduce new products and processes with improved price/performance characteristics.

The Micralign products manufactured by SVGL are generally not competitive with steppers for fabrication of semiconductor devices with line widths smaller than 1.25 micron. In marketing Micrascan systems, SVGL continues to face competition from suppliers employing other technologies, principally I-Line and DUV steppers, including Nikon Corp., Canon and ASM Lithography who have begun shipping initial quantities of .25 micron step-and-scan photolithography systems which utilize DUV light sources. The Company believes DUV lithography is required to fabricate devices with line widths below 0.3 micron.\* Semiconductor manufacturers can purchase DUV steppers to produce product at .25 micron line widths. However, the Company believes that as devices increase in complexity and size and require finer line widths, the technical advantages of DUV step-and-scan systems, as compared to DUV steppers, will enable semiconductor manufacturers to achieve finer line widths with improved critical dimension control which will result in higher yields of faster devices.\* The Company also believes that the industry transition to DUV step-and-scan systems has accelerated in calendar 1999 and that advanced semiconductor manufacturers are beginning to require volume quantities of production equipment as advanced as the current and pending versions of Micrascan to produce both critical and to some degree sub-critical layers of semiconductor devices.\* Currently, competitive DUV step-and-scan equipment capable of producing .25 micron line widths and below is available in limited quantities from Nikon, Canon and ASM Lithography. There can be no assurance that the Company will be successful in competing with such systems.\* Further, if manufacturers of DUV steppers are able to further enhance existing technology to achieve finer line widths sufficiently to erode the competitive and technological advantages of DUV step-and-scan systems, or other manufacturers of step-and-scan systems are successful in supplying sufficient quantities of product in a timely manner that are technically equal to or better than the Micrascan, demand for the Micrascan technology may not develop as the Company expects.\*

### **Importance of the Japanese and Pacific Rim Markets**

The Company's customers are heavily concentrated in the United States and Europe. The Japanese and Pacific Rim markets (including fabrication plants located in other parts of the world which are operated by Japanese and Pacific Rim semiconductor manufacturers) represent a substantial portion of the overall market for semiconductor manufacturing equipment. To date, neither the Company's shipments into Japan nor the Pacific Rim have been significant. The Company believes that the Japanese companies with which it competes have a competitive advantage because their dominance of the Japanese and Pacific Rim semiconductor equipment market provides them with the sales and technology base to compete more effectively throughout the rest of the world.\* The Company is not engaged in any significant collaborative effort with any Japanese or Pacific Rim semiconductor manufacturers. As a result, the Company may be at a competitive disadvantage to the Japanese equipment suppliers that are engaged in such collaborative efforts with Japanese and Pacific Rim semiconductor manufacturers. The Company believes that it must substantially increase its share of these markets if it is to compete as a global supplier.\* Further, in many instances, Japanese and Pacific Rim semiconductor manufacturers fabricate devices such as dynamic random access memory devices ("DRAMs"), with potentially different economic cycles than those affecting the sales of devices manufactured by the majority of the Company's U.S. and European customers. Failure to secure customers in these markets may limit the global market share available to the Company and may increase the Company's vulnerability to industry or geographic downturns.\*

In the past, several of the Company's larger customers have entered into joint ventures ("JV") with European, Japanese or Pacific Rim semiconductor manufacturers. In such cases, the Company has encountered intense price competition from foreign competitors who are suppliers to the non-U.S. member of the JV. Further, in certain instances the Company has not secured the equipment order when the non-U.S. member has had the responsibility for selecting the equipment to be used by

the JV in its U.S. operations. There can be no assurance that as the Company's customers form additional alliances, whether in the U.S. or in other parts of the world, that the Company will be successful in obtaining equipment orders or that it will be able to obtain orders with sufficient gross margin to generate profitable transactions, either of which could have an adverse effect on the Company's results of operations.\*

Throughout the Pacific Rim, the Company is attempting to compete with major equipment suppliers having significant market share and established service and support infrastructures in place. The Company has invested in the staffing and facilities that it believes are necessary to sell, service and support customers in the Pacific Rim and with the acquisition of SEG, the Company acquired from Watkins-Johnson Company a 36,000 square foot customer demonstration facility in Kawasaki City, Japan. However, the Company anticipates that it will continue to encounter significant price competition as well as competition based on technological ability.\* There can be no assurance that the Company's Pacific Rim operations will be profitable, even if it is successful in obtaining significant sales into this region.\* Further, due to recent economic issues in certain Asian countries, particularly Korea, the Company's ability to penetrate such markets has been more difficult. Failure to secure customers in these markets would have an adverse effect on the Company's business and results of operations.\*

### **Manufacturing and Raw Materials**

The Company manufactures its products from standard components and from components manufactured by others according to the Company's design specifications. Track products are manufactured in San Jose, California. Thermal products are primarily manufactured in Orange and Scotts Valley, California. Tinsley manufactures optical components in Richmond and North Hollywood, California. SVGL photolithography exposure products are manufactured in Wilton and Ridgefield, Connecticut.

From time-to-time, the Company has experienced delays in the introduction of its products and product enhancements due to technical, manufacturing and other difficulties and may experience similar delays in the future.\* For example, during fiscal 1996, the Company announced the subsequently terminated 200-APS Track product. Initial shipments of the 200-APS were scheduled to commence during the second quarter of fiscal 1997, and were delayed until the second quarter of fiscal 1998. This delay, as well as industry developments, caused the Company to implement a plan, which was announced on September 30, 1998, to terminate future development and shipments of its 200-APS products, and to concentrate its efforts on completing the ProCell product which had been in development for approximately one year. There can be no assurance that the Company will not experience delays in completing the development or manufacturing problems related to the ProCell product as a result of instability of the design of either the hardware or software elements of the new technology, or be able to efficiently manufacture the new product or other products.\* In June of 1999 the Company introduced the ProCell product for shipment in fiscal 2000. The Company believes that protracted delays in delivering initial quantities of this newly introduced product or any new product to multiple customers could result in semiconductor manufacturers electing to install competitive equipment and could preclude industry acceptance of the ProCell product or any of the Company's products.\* The inability to produce such products or any failure to achieve market acceptance could have a material effect on the Company's business, results of operations and could result in a subsequent loss of future sales.\*

In June of 1999, five participants in the 193 Development Program decided that their product needs have changed for initial 193-nanometer machines and have withdrawn from the development program and declined delivery of initial tools. These participants withdrew in part due to delays in product introduction and changes in participant's technical requirements. As the Lithography demands continue, the Company is responding by accelerating the development of a very high numerical aperture ("VHNA") version of its 193 product. In order to address a broader market with this tool, the Company is also redesigning its stage technology to optimize cost of ownership. Although the Company believes that the timing of the introduction of the product will be sufficient to meet volume production requirements of .13 micron, there can be no assurance that the product will be introduced on time or that customers will wait for the product to commit for their production needs.\* The absence of a successful implementation of the product or obtaining sufficient orders for this product could have a material adverse impact on the future profitability of the Company.\*

Semiconductor manufacturers tend to select either a single supplier or a primary supplier for a certain type of equipment. The Company believes that prolonged delays in delivering initial quantities of newly developed products to multiple customers, whether due to the protracted release of product from engineering into manufacturing or due to manufacturing difficulties, could result in semiconductor manufacturers electing to install competitive equipment in their fabrication facilities and could preclude industry acceptance of the Company's products.\* For example, the Company's

largest Track customer has decided to secure deliveries from another source, a decision the Company believes is primarily due to the delay and subsequent termination of the 200-APS. Initial shipments into the market of a new technology Track product, the ProCell, is not expected until fiscal 2000.\* As a result, competitors will increase their market share, and it will be increasingly more difficult for the Company to regain market position.\* The Company's inability to effect the timely production of new products or any failure of these products to achieve market acceptance could have a material adverse effect on the Company's business and results of operations.\*

Historically, the unit cost of the Company's products has been the highest when they are newly introduced into production and cost reductions have come over time through engineering improvements, economies of scale and improvements in the manufacturing process.\* As a result, new products have, at times, had an unfavorable impact on the Company's gross margins and results of operations. There can be no assurance that the initial shipments of new products will not have an adverse effect on the Company's profitability or that the Company will be able to attain design improvements, manufacturing efficiencies or manufacturing process improvements over time.\* Further, the potential unfavorable effect of newly introduced products on profitability can be exacerbated when there is intense price competition in the marketplace.

The time required to build a Micrascan system is significant. If SVGL is to be successful in supplying increased quantities of Micrascan systems, it will not only need to be able to build more systems, it will need to build them faster.\* SVGL will require additional trained personnel, additional raw materials and components and improved manufacturing and testing techniques to both facilitate volume increases and shorten manufacturing cycle time.\* To that end, SVGL is continuing to develop its vendor supply infrastructure, and implement manufacturing improvements.\* Additionally, the Company believes that as it increases its penetration of the Micrascan product, it must resume increasing its factory, field service and technical support organization staffing and infrastructure to support the anticipated customer requirements.\* There can be no assurance that the Company will successfully increase its penetration of the Micrascan product or that the Company will not experience manufacturing difficulties or encounter problems in its attempt to increase production and upgrade or expand existing operations.\*

One of the most critical components of the Micrascan systems is the projection optics, which are primarily manufactured by SVGL. As part of its overall investment in capacity, the Company has increased SVGL's optical manufacturing floor space. The Company believes that in order for SVGL to be a viable supplier of advanced lithography systems in the future, it must successfully reduce the cycle times required to build projection optics.\*

In November 1997, the Company acquired Tinsley Laboratories, Inc. ("TLI") in exchange for approximately 1,091,000 shares of Company common stock. TLI designs, manufactures and sells precision optical components, assemblies and systems to customers in a variety of industries and research endeavors. The primary reasons for the acquisition were TLI's technology and expertise relating to aspherical lenses, a key component of SVGL's photolithography products, the adaptation of certain of TLI's manufacturing processes by SVGL and TLI's commencement of the fabrication of non-aspherical lenses which are currently produced by SVGL. However, there can be no assurance that TLI's manufacturing technology is scaleable, or that such expertise can be transferred without substantial time or expense, if at all.\* The inability of SVGL to transfer this production technology for use in processes of a substantially larger scale or the inability of TLI to manufacture non-aspherical lenses for SVGL in sufficient quantities to realize efficiencies of scale could adversely affect the Company's ability to realize any significant benefits from the acquisition of TLI.\*

The Company believes that protracted delays in delivering quantities of both current and future generations of Micrascan products to multiple worldwide customers could result in semiconductor manufacturers electing to install competitive equipment in their advanced fabrication facilities, and could preclude industry acceptance of the Micrascan technology and products.\* In addition, the Company's operating results could also be adversely affected by the increase in fixed costs and operating expenses related to increases in production capacity and field service and technical support activities if net sales do not increase commensurately.\*

Most raw materials and components not produced by the Company are available from more than one supplier. However, certain raw materials, components and subassemblies are obtained from single sources or a limited group of suppliers. Although the Company seeks to reduce its dependence on these sole and limited source suppliers, and the Company has not experienced significant production delays due to unavailability or delay in procurement of component parts or raw materials to date, disruption or termination of certain of these sources could occur and such disruptions could have at least a temporary adverse effect on the Company's business and results of operations.\* Moreover, a prolonged inability to obtain certain

components could have a material adverse effect on the Company's business and results of operations and could result in damage to customer relationships.\*

The raw material for a proprietary component of the optical system for the Micrascan is available from only one supplier. The supplier has expanded its capacity to meet SVGL's projected long-term requirements and has created and stored agreed upon quantities of safety stock. There can be no assurance that the supplier will be able to provide acceptable quantities of material required by SVGL.\* Additionally, a version of the Company's Micrascan III photolithography system utilizes an Excimer laser that is manufactured in volume by only one supplier. In fiscal 1999 SVGL qualified an additional source of lasers for its current and future versions of Micrascan products, allowing the potential for the integration of such lasers into its system configurations.\* However, there can be no assurance that its customers will be receptive to procuring products with lasers from this supplier, or the supplier will be able to provide product of sufficient quantity and quality.\* If these suppliers were unable to meet their commitments, SVGL would be unable to manufacture the quantity of products required to meet the anticipated future demand, which would have a material adverse effect on the Company's business and results of operations.\*

It is anticipated that a critical component of the optical system for the 157-nanometer lithography product, which is currently under development, will utilize Calcium Fluoride.\* Calcium Fluoride is a raw material that has been known to be in short supply and is integral to the production of optics capable of producing quality line widths of .10 and below. The Company has or expects to shortly qualify three suppliers who could be sources of this raw material for the Company.\* There can be no assurance that these suppliers will be able to supply the quality or quantity of the product necessary for the Company to meet expected future demand, which could have a material adverse effect on the Company's business and results of operations.\*

## **Patents and Licenses**

The Company owns several domestic and foreign patents relating to the businesses of Track, Thermal and SVGL products. Although the Company has historically relied and continues to rely on the technical and marketing competence and creative ability of its personnel, rather than patents, to maintain its competitive position, it has begun to pursue both domestic and foreign patent protection more aggressively.

As is typical in the semiconductor equipment industry, the Company has from time to time received, and may in the future receive, communications from third parties asserting patents or copyrights on certain of the Company's products and technologies. Two of the Company's customers have notified the Company that they have received a notice of infringement from Jerome H. Lemelson, alleging that equipment used in the manufacture of electronic devices infringes patents issued to Mr. Lemelson relating to "machine vision" or "barcode reader" technologies. The customers have put the Company on notice that it intends to seek indemnification from the Company for any damages and expenses resulting from this matter if found liable or if the customer settles the claim. The Company cannot predict the outcome of this or any similar claim or its effect upon the Company, and there can be no assurance that any such litigation or claim would not have a material adverse effect upon the Company's financial condition or results of operations.\*

## **Employees**

At September 30, 1999, the Company had 2,815 full-time employees and 263 part-time employees and contract personnel, including 782 in research and development, 1,315 in manufacturing, 833 in marketing, sales and customer service and support and 148 in administration. None of the Company's employees are represented by a union. Management considers its relations with its employees to be good.

The Company's future success will continue to depend to a large extent on the continued contributions of its executive officers and key management and technical personnel. In particular, SVGL's future growth is very dependent on the Company's ability to attract and retain key skilled employees, particularly those related to the optical segment of its business. The Company is a party to agreements with each of its executive officers to help ensure the officers' continual service to the Company in the event of a change-in-control. Each of the Company's executive officers, and key management and technical personnel would be difficult to replace. The loss of the services of one or more of the Company's executive officers or key personnel, or the inability to continue to attract qualified personnel could delay product development cycles or otherwise have a material adverse effect on the Company's business, financial condition and results of operations.\*



## Executive Officers of the Registrant

The executive officers of the Company are as follows:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Papken S. Der Torossian	60	Chairman of the Board and Chief Executive Officer
William A. Hightower	56	President and Chief Operating Officer
Russell G. Weinstock	56	Vice President, Finance and Chief Financial Officer
Steven L. Jensen	50	Vice President, Worldwide Sales and Marketing
Jeffrey M. Kowalski	46	Vice President, President, Thermal Systems
Boris Lipkin	52	Vice President, Corporate
Larry W. Sonsini	58	Secretary

*Mr. Der Torossian* became Chairman of the Board and Chief Executive Officer in July 1991, and has been a director of the Company since October 1984.

*Mr. Hightower* became President and Chief Operating Officer in August 1997. He has been a member of the Board of Directors of the Company since 1994. From January 1996 to August 1997, Mr. Hightower was the Chairman of the Board of Directors and Chief Executive Officer of Cadnet Corporation and from August 1989 to December 1995, he was the President and Chief Executive Officer of Telematics International, Inc.

*Mr. Weinstock* has been Vice President of Finance and Chief Financial Officer of the Company since July 1990.

*Mr. Jensen* became a Vice President of the Company in July 1992 and Vice President, Worldwide Sales in April 1992.

*Mr. Kowalski* became a Vice President of the Company and President of Thermal Systems in January 1995. From November 1992 to January 1995 he was the Vice President of Marketing of Thermal Systems, as well as its Vice President of Technology from November 1993.

*Mr. Lipkin* became a Vice President of the Company in March 1995. From August 1992 to March 1995 he was the Vice President and General Manager of the Thin Film Systems business unit of Varian Associates.

*Mr. Sonsini* has been Secretary since November 1988. He was a member of the Board of Directors of the Company from 1991 to 1997. Mr. Sonsini is a member of the law firm of Wilson Sonsini Goodrich & Rosati, Professional Corporation, counsel to the Company, and is the Chairman of the firm's Executive Committee. Mr. Sonsini serves on the boards of directors of Lattice Semiconductor Corporation, Novell, Inc., and PIXAR.

## Item 2. *Properties.*

The Company's corporate headquarters are located in San Jose, California in 36,000 square feet of office space. This space is under a lease that expires in 2006 and has a current base rental of approximately \$69,000 per month.

The Company's Track Systems Division has two leased facilities in San Jose, California. The first is a 90,000 square foot, two-story building with a current monthly base rental of approximately \$95,000 and a lease expiration of 2004. The second is also a two-story building consisting of approximately 83,000 square feet. The monthly base rental for this facility is approximately \$53,000 under a lease expiring in 2003.

In March 1996, the Company purchased approximately nine acres of land adjacent to one of the Track facilities in San Jose, California. Although the Company currently has no plans to develop the parcel, it provides the flexibility for future expansion of the Company's Track operations and its thermal processing lab.

The Thermal Systems Division has two facilities in Orange and one nine building facility in Scotts Valley, California. The first Orange facility consists of approximately 92,000 square feet with a base monthly rent expense of approximately \$53,000 under a lease expiring in 2004. The second facility consists of approximately 77,000 square feet with a base monthly rental expense of approximately \$46,000 under a lease expiring in 2000. The Scotts Valley facility consists of nine buildings comprising approximately 205,000 square feet with a base monthly rent expense of approximately \$100,000 under a lease expiring in 2004.

SVGL owns two facilities in Fairfield County, Connecticut. The first consists of approximately 29 acres of land and buildings totaling approximately 276,000 square feet, located in Wilton, Connecticut. The second consists of approximately 50 acres of land and a 201,000 square foot building located in Ridgefield, Connecticut

The Company acquired a facility in Kawasaki, Japan from the Semiconductor Equipment Group of Watkins-Johnson Company. The facility consists of a 36,000 square foot, two-story building on approximately one acre of land.

Tinsley owns two facilities in Richmond, California. The first consists of approximately three acres of land and buildings totaling 64,000 square feet. The second consists of two acres of land with a 32,000 square foot facility.

Tinsley, which owns Century Precision Optics, has two facilities in North Hollywood, California. The first facility consists of approximately 21,000 square feet with a base monthly rent expense of approximately \$21,300 under a lease expiring in 2004. The second facility consists of approximately 5,000 square feet with a base monthly rent expense of approximately \$4,500. This lease is on a month to month basis.

The Company also leases storage and warehouse space near its headquarters in San Jose, office and warehouse space near its Thermal facilities in Orange and Scotts Valley, sales and service offices in key locations throughout the United States, Western Europe and the Pacific Rim.

### **Item 3. *Legal Proceedings.***

On or about August 12, 1998, Fullman International Inc. and Fullman Company LLC (collectively, "Fullman") initiated a lawsuit in the United States District Court for the District of Oregon alleging claims for fraudulent conveyance, constructive trust and declaratory relief in connection with a settlement the Company had previously entered into resolving its claims against a Thailand purchaser of the Company's equipment. In its complaint against the Company, Fullman, allegedly another creditor of the Thailand purchaser, alleges damages of approximately \$11,500,000 plus interest. The Company has successfully moved to transfer the case to the United States District Court for the Northern District of California. The trial is tentatively scheduled for July 2000.

While the outcome of such litigation is uncertain, the Company believes it has meritorious defenses to the claims and intends to conduct a vigorous defense. However, an unfavorable outcome in this matter could have a material adverse effect on the Company's financial condition.\*

On July 8, 1999, the Company filed a complaint for copyright infringement to protect its investment and intellectual property from six third party vendors ("the Defendants"), subsequently, complaints against two of the Defendants were withdrawn by the Company. The complaint was filed against the Defendants alleging that the named defendants have infringed upon certain copyrights owned by the Company on its 8X series equipment by duplicating or modifying software in the refurbishment and sale of replacement boards. The complaint further asks for preliminary and permanent injunction against the Defendants' further infringement of the Company's copyrights and sale of infringing systems and boards, and for an award of damages. One of the Defendants has filed a counterclaim against the Company in response to the Company's complaint.

In addition to the above, the Company, from time to time, is party to various legal actions arising out of the normal course of business, none of which is expected to have a material effect on the Company's financial position or operating results.

### **Item 4. *Submission of Matters to a Vote of Security Holders.***

No matter was submitted to a vote of the Company's security holders during the fiscal quarter ended September 30, 1999.

## PART II

### Item 5. Market for Registrant's Common Equity and Related Stockholder Matters.

The Company's common stock is traded in the over-the-counter market on the Nasdaq National Market System under the symbol SVGL. The following table sets forth the range of high and low sales prices of the stock during fiscal years 1998 and 1999 as reported by Nasdaq-NMS.

	Fiscal 1998		Fiscal 1999	
	High	Low	High	Low
First Quarter	\$36 <sup>1</sup> / <sub>4</sub>	\$18 <sup>3</sup> / <sub>8</sub>	\$13 <sup>5</sup> / <sub>16</sub>	\$ 6 <sup>5</sup> / <sub>8</sub>
Second Quarter	27 <sup>7</sup> / <sub>8</sub>	19	17 <sup>5</sup> / <sub>16</sub>	10 <sup>3</sup> / <sub>8</sub>
Third Quarter	21 <sup>1</sup> / <sub>2</sub>	15 <sup>3</sup> / <sub>4</sub>	16 <sup>13</sup> / <sub>16</sub>	12 <sup>1</sup> / <sub>16</sub>
Fourth Quarter	16 <sup>1</sup> / <sub>2</sub>	8	17 <sup>11</sup> / <sub>16</sub>	11

To date, the Company has not declared or paid dividends on its common stock. The Board of Directors of the Company presently intends to retain all earnings for use in the Company's business and therefore does not anticipate declaring or paying any cash dividends in the foreseeable future. The Company's revolving credit facility prohibits the payment of cash dividends on common stock. As of November 26, 1999, there were 806 holders of record of the common stock.

### Item 6. Selected Financial Data.

The following selected consolidated financial data concerning the Company for and as of the end of each of the years in the five year period ended September 30, 1999, are derived from the audited consolidated financial statements of the Company. The selected financial data are qualified in their entirety by the more detailed information and financial statements, including the notes thereto. The financial statements of the Company as of September 30, 1999, and for each of the three years in the period ended September 30, 1999, and the report of Deloitte and Touche LLP thereon, are included elsewhere in this report.

(in thousands, except per share amounts)	Years Ended September 30,				
	1995	1996	1997	1998	1999
Statement of operations data:					
Net sales	\$475,141	\$657,337	\$614,226	\$608,625	\$473,690
Income (loss) before income taxes and minority interest	61,696	99,809	4,198	(27,157)	(37,436)
Net income (loss)	39,263	64,099	2,592	(13,577)	(25,456)
Preferred stock dividend	537	—	—	—	—
Net income (loss) per share—basic	\$ 1.66	\$ 2.09	\$ 0.08	\$ (0.42)	\$ (0.77)
Shares used in per share computations—basic	23,627	30,657	31,635	32,438	32,926
Net income (loss) per share—diluted	\$ 1.61	\$ 2.06	\$ 0.08	\$ (0.42)	\$ (0.77)
Shares used in per share computations—diluted	24,326	31,122	32,414	32,438	32,926
Balance Sheet Data:					
Working capital	\$328,128	\$466,637	\$420,486	\$371,960	\$382,155
Total assets	513,665	744,257	756,017	730,590	754,773
Long-term debt and capital leases	2,015	1,718	6,515	5,865	26,790
Stockholders' equity	358,614	551,242	573,110	561,530	557,537
Other Data:					
Backlog	\$400,324	\$404,889	\$437,668	\$254,129	\$357,455
Number of employees	2,757	3,185	3,515	2,660	3,078

## **Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.**

The information in this discussion contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements are subject to certain risks and uncertainties, including those discussed below that could cause actual results to differ materially from those projected. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. Forward-looking statements are indicated by an asterisk (\*) following the sentence in which such statement is made. The Company undertakes no obligation to publicly release the results of any revisions to these forward-looking statements which may be made to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

### **Results Of Operations**

The Company primarily designs, manufactures, markets and services semiconductor processing equipment used in the fabrication of integrated circuits. The Company's products are used in photolithography for exposure and photoresist processing, and in deposition for oxidation/diffusion and low pressure chemical vapor deposition ("LPCVD"), and with the acquisition of the Semiconductor Equipment Group of Watkins-Johnson, thermal processing products which address atmospheric pressure chemical vapor deposition ("APCVD"). The Company manufactures and markets photolithography exposure SVGL products, photoresist processing Track products, oxidation/diffusion, chemical vapor deposition and LPCVD, APCVD Thermal products and certain precision optical components.

On July 6, 1999, the Company acquired the business of the Semiconductor Equipment Group of Watkins-Johnson Company ("SEG"). The acquisition was accounted under the purchase method of accounting for financial reporting purposes. The results of the Company for fiscal 1999 include the operating results of SEG from the date of acquisition.

On November 26, 1997, the Company acquired Tinsley Laboratories, Inc. ("TLI"). The transaction has been accounted for as a pooling of interests for financial reporting purposes. All amounts discussed below have been retroactively restated to reflect the inclusion of TLI.

The semiconductor industry into which the Company sells its products is highly cyclical and has, historically, experienced periodic downturns that have had a severe effect on the semiconductor industry's demand for semiconductor processing equipment. As a result of the Asian economic crisis which began in 1997, an oversupply of certain semiconductor products, the impact of low cost personal computers, and various other factors, semiconductor manufacturers reduced planned expenditures and cancelled or delayed the construction of new fabrication facilities. This slowdown in demand began to impact the Company during the first quarter of fiscal 1998 and continued to impact the Company through out fiscal 1999. The slowdown in demand resulted in the Company experiencing lower new customer orders, customer deferrals of scheduled equipment delivery dates and, to a lesser extent, customer order cancellations. Customer orders with scheduled delivery dates are referred to by the Company as bookings. Last year's lower bookings, order rescheduling and cancellations, have caused sales and net income during fiscal 1999 to decline from prior years amounts. Although the Company has experienced a modest improvement in new bookings as during the second half of fiscal 1999 the Company recorded new bookings of \$324,213,000 up from new bookings of \$254,444,000 and \$237,451,000 during the first half of fiscal 1999 and the second half of fiscal 1998, respectively, there can be no assurance that the dollar amount of new bookings will continue to increase. There can be no assurance that the Company will not in the future experience further customer delivery deferrals, additional order cancellations or a prolonged period of customer orders at reduced levels, any or a combination of which would have a material adverse effect on the Company's business and results of operations.\*

During fiscal 1998 in an effort to lessen the impact of these lower sales volumes, the Company took several steps to reduce operating expenses including a reduction in workforce, temporary shutdowns and the restructuring of certain portions of the Company's business. During the second half of fiscal 1998, the Company shut down the majority of its operations for 15 days and recorded restructuring and related charges of \$33,680,000. The restructuring and related charges include costs of \$28,521,000 resulting from the termination of the Company's previously announced 200-APS photoresist processing system and a provision of \$5,159,000 for 1998 reductions in the Company's workforce for approximately 1,150 employees.

Historically, the Company has relied on a limited number of customers for a substantial percentage of its net sales. In fiscal 1999, the Company's largest customer accounted for 56% of net sales. The Company believes that, for the foreseeable future, it will continue to rely on a limited number of major customers for a substantial percentage of its net sales.\*

## **Fiscal 1999 Compared To Fiscal 1998**

Net sales for fiscal 1999 were \$473,690,000, 22% below fiscal 1998 net sales of \$608,625,000. The decrease in net sales was due to lower shipments of Track, Thermal and Lithography products during fiscal 1999, offset in part by sales of APCVD products during the fourth quarter of fiscal 1999 resulting from the SEG acquisition. The decrease in net sales occurred across all geographies except Israel where sales increased by \$40,298,000 reflecting continued expansion of customer manufacturing operations in Israel.

The Company's fiscal 1999 net bookings were \$545,709,000, representing a book to bill ratio of 1.15 to 1, significantly above fiscal 1998 net bookings of 427,272,000, representing a book to bill ratio of .70 to 1. At September 30, 1999, the Company had a backlog of \$357,455,000, a 41% increase over September 30, 1998 backlog of \$254,129,000. The Company includes in backlog only those orders to which a purchase order number has been assigned by the customer, with substantially all of the terms and conditions agreed upon, and for which delivery has been specified within twelve months. During the third quarter of fiscal 1999, the Company reduced its 193-nanometer orders by approximately \$53,000,000; of this amount, customer orders for three machines totaling \$31,500,000 were cancelled and removed from the Company's backlog due to customer requirements having changed. (See "SVGL—Research and Development Funding"). Backlog at September 30, 1999, included orders for 47 Micrascan photolithography products.

During the first quarter of fiscal 1999, the Company recognized net sales of approximately \$20,000,000 from one customer who accepted and took title to the related equipment and agreed to normal payment terms, but requested that the Company store the equipment until predetermined shipment dates. During fiscal 1998 approximately \$58,000,000 in net sales to two such customers was recognized. At September 30, 1999, the Company was storing approximately \$1,500,000 of such equipment with a scheduled shipment date of March 2000.

Fiscal 1999 gross margin was 34%, slightly above fiscal 1998 gross margin of 33%. Fiscal 1998 cost of sales includes \$19,117,000 in restructuring charges for the write-off of 200-APS inventory. Excluding the impact of the 200-APS inventory charge, the fiscal 1998 adjusted gross margin was 36%. The decrease in fiscal 1999 gross margin when compared to fiscal 1998 adjusted gross margin was primarily the result of the impact associated with the fourth quarter fiscal 1999 inventory provision due to the cancellation of orders (discussed above) under the Low NA 193nm Lithography program, higher per unit costs resulting from lower shipment volumes of Thermal products, partially offset by higher margin shipments of the Company's newly acquired APCVD products.

Research, development and related engineering ("R&D") expenses are net of funding received from outside parties under various development agreements. Such funding is typically payable upon the attainment of one or more development milestones that are specified in the agreements. During fiscal years 1997, 1998 and 1999 funding was primarily related to agreements between the Company and certain customers for the development of a 193-nanometer Micrascan system ("193 Development Program"). During June 1999 certain participants in the 193 Development Program decided that their product needs have changed for initial 193-nanometer machines and have withdrawn from the development program and chosen to use or are evaluating other solutions. (See "SVGL—Research and Development Funding.")

During fiscal 1999, R&D expenses were \$94,698,000 (20% of net sales), compared to \$87,272,000 (14% of net sales) during fiscal 1998. Such R&D amounts are net of funding recognized under joint development agreements of \$2,902,000 and \$11,997,000 during fiscal 1999 and fiscal 1998, respectively. R&D expense increased over fiscal 1998 primarily due to increased spending on the 157-nanometer development program, reduced development funding, offset in part by reduced spending on the 200-APS Track product resulting from its fiscal 1998 cancellation. The increase in R&D as a percentage of net sales reflects the significant year-to-year decrease in net sales.

Fiscal 1999, marketing, general and administrative ("MG&A") expenses were \$109,819,000 (23% of net sales), lower than fiscal 1998 MG&A of \$130,615,000 (21% of net sales). The decrease in MG&A from the preceding year was primarily due to reduced product support costs. The increase in MG&A as a percentage of net sales reflects the significant year-to-year decrease in net sales.

As discussed above, during the fourth quarter of fiscal 1998, the Company recorded restructuring and related charges of \$33,680,000, of which \$14,563,000 was classified as operating expenses. During the fourth quarter of fiscal 1999, the Company revised its estimate primarily relating to severance and benefits and reversed approximately \$506,000 of the fiscal 1998 restructuring and related charges accrued against operating expenses.

For fiscal 1999, the Company had an operating loss of \$42,640,000, compared to an operating loss of \$32,221,000 during fiscal 1998. In comparison to the preceding year, the increase in the operating loss is primarily from reduced gross margin resulting from reduced net sales, increased R&D expenses offset in part by the absence of restructuring charges in fiscal 1999 and lower MG&A expenses.

Interest and other income was \$6,509,000 during fiscal 1999 compared to \$6,082,000 for fiscal 1998. The year to year increase in interest and other income was primarily the result of foreign currency translation and exchange gains offset in part by lower interest income due to lower average cash balances available for investment.

Interest expense in fiscal 1999 was \$1,305,000 compared to fiscal 1998 interest expense of \$1,018,000. The increase in interest expense between periods is primarily due to the three Japanese bank loans assumed in connection with the acquisition of SEG. (See Note 8 to the Consolidated Financial Statements).

The Company recorded a 32% benefit for income taxes for fiscal 1999, compared to a 50% benefit for fiscal 1998. Variations in the Company's effective tax rate relate primarily to changes in the geographic distribution of its pretax income and certain tax-free interest income. (See Note 10 to the Consolidated Financial Statements).

For fiscal 1999 the Company had a net loss of \$25,456,000 (\$0.77 loss per share—diluted), compared to a net loss of \$13,577,000 (\$0.42 loss per share—diluted) for fiscal 1998.

### **Fiscal 1998 Compared To Fiscal 1997**

For fiscal 1998, net sales were \$608,625,000, slightly below fiscal 1997 net sales of \$614,226,000. The decrease in net sales was due to lower shipments of Thermal and Track products during fiscal 1998, offset in part by increased shipments of the SVGL Micrascan photolithography product. The decrease in net sales occurred across all geographies except Ireland and Israel where sales increased by \$83,285,000 and \$11,118,000, respectively. These increases reflected expansions of customer manufacturing operations in these countries.

The Company's fiscal 1998 net bookings were \$427,272,000, which represented a book to bill ratio of 0.70 to 1, significantly below fiscal 1997 net bookings of \$648,001,000, which represented a book to bill ratio of 1.05 to 1. At September 30, 1998, the Company had a backlog of \$254,129,000, a 42% decrease from the September 30, 1997 backlog of \$437,668,000.

For fiscal 1998, the Company's gross margin was 33%, significantly below the fiscal 1997 gross margin of 38%. Fiscal 1998 included a restructuring charge of \$19,117,000 for the write-off of 200-APS inventory, which has been included in cost of sales. This restructuring charge accounted for 3% of the year to year decrease in gross margin. Without taking into account the 200-APS inventory charge, the fiscal 1998 gross margin was 36%, a decrease of 2% from the fiscal 1997 gross margin. This decrease was primarily the result of lower volumes and higher fixed costs for SVGL products during the second half of fiscal 1998 and the overall effect of lower volumes of Thermal and to a lesser degree, Track products.

R&D expenses were \$87,272,000 (14% of net sales) during fiscal 1998, compared to \$74,311,000 (12% of net sales) during fiscal 1997. Such R&D amounts are net of funding recognized under joint development agreements of \$11,997,000 and \$7,968,000 during fiscal 1998 and fiscal 1997, respectively. The year to year increase in R&D was primarily due to new product and process development, particularly for SVGL products, the design and development of equipment capable of processing the next generation 300mm wafer and costs associated with Track's subsequently terminated 200-APS program.

During late fiscal 1996 and early fiscal 1997, the Company sold approximately \$20,000,000 in product to SubMicron Technology PCL ("SMT"), a newly established semiconductor foundry in Thailand. SMT paid the Company approximately \$14,000,000 before encountering severe financial difficulties. During the third quarter of fiscal 1997, the Company determined that the remaining receivable from SMT was uncollectible. After reversing costs accrued for the installation and warranty of the products sold to SMT, the Company recorded a net charge against its fiscal 1997 operating results of approximately \$4,000,000 (the "SMT Charge").

During fiscal 1998, marketing, general and administrative ("MG&A") expenses were \$130,615,000 (21% of net sales), lower than fiscal 1997 MG&A of \$134,642,000 (22% of net sales). The decrease in MG&A from the preceding year was primarily due to the effect of the SMT Charge on fiscal 1997 MG&A.

As discussed above, during the fourth quarter of fiscal 1998, the Company recorded restructuring and related charges of \$33,680,000, of which \$14,563,000 was classified as operating expenses.

Under the terms of a research and development agreement, SVGL owed IBM certain royalties based on future operating results. During the second quarter of fiscal 1997, the Company satisfied its obligation to IBM, recognized an expense of \$32,582,000, which represented royalties related to products currently under development, and recorded a prepayment of \$5,418,000, which represented royalties related to existing products which are being amortized through fiscal 2000.

For fiscal 1998, the Company had an operating loss of \$32,221,000, compared to an operating loss of \$5,423,000 during fiscal 1997. In comparison to the preceding year, the fiscal 1998 operating loss was the result of the restructuring charges, lower gross margins on lower net sales and increased R&D expenses, offset in part by the non-recurring royalty settlement during fiscal 1997.

Interest and other income was \$6,082,000 during fiscal 1998 compared to \$10,639,000 for fiscal 1997. The year to year decrease in interest and other income was primarily the result of lower interest income due to lower average cash balances available for investment, foreign currency translation and exchange losses, in large part due to the strength of the U.S. dollar during fiscal 1998, and the absence of certain royalty income under an agreement which expired during the fourth quarter of fiscal 1997.

Interest expense of \$1,018,000 in fiscal 1998 was equivalent to fiscal 1997 interest expense of \$1,018,000. Interest expense in fiscal 1998 and 1997 was primarily associated with a \$6,500,000 loan received from the Connecticut Development Authority. (See Note 8 to the Consolidated Financial Statements).

The Company recorded a 50% benefit for income taxes for fiscal 1998, compared to a 36% provision for fiscal 1997. Variations in the Company's effective tax rate relate primarily to changes in the geographic distribution of its pretax income, settlement of royalty obligations and certain tax-free interest income. (See Note 10 to the Consolidated Financial Statements).

The minority interest reflected in the Company's 1997 financial statements represents that share of SVGL's operating results attributable at the time to its minority stockholder, IBM. In March 1997, the Company purchased IBM's interest in SVGL for \$3,000,000. The Company now accounts for SVGL as a wholly owned subsidiary and there is no longer a minority interest. In fiscal 1997, minority interest was recorded from the beginning of the fiscal year through the date the Company purchased IBM's interest and represented a reduction from income of \$92,000.

For fiscal 1998 the Company had a net loss of \$13,577,000 (\$0.42 loss per share—diluted), compared to net income of \$2,592,000 (\$0.08 per share—diluted) for fiscal 1997.

### **Liquidity and Capital Resources**

At September 30, 1999, cash and cash equivalents and short-term investments totaled \$142,246,000, a decrease of \$7,754,000 from the September 30, 1998 balance of \$150,000,000 and a decrease of \$64,415,000 from the September 30, 1997 balance of \$206,661,000.

During fiscal years 1999 and 1998 the Company generated \$2,933,000 and \$22,422,000, respectively, in cash from operating activities. Contributors to positive cash from operations during fiscal 1999 include non-cash depreciation and amortization, reduced inventories and refundable income taxes offset in part by increased accounts receivable resulting from increased fourth quarter sales, a net loss of \$25,456,000 for the fiscal year and reduced accrued liabilities.

Net cash used for investing activities for fiscal years 1999 and 1998 was \$45,996,000 and \$30,661,000, respectively. During fiscal 1999 purchases of capital equipment were \$30,937,000 and net purchases of temporary investments were \$15,198,000.

Net cash provided by financing activities was \$19,056,000 in fiscal 1999 compared to \$2,941,000 during fiscal 1998. During fiscal 1999 the Company received \$14,976,000 from the sale of preferred stock and \$4,940,000 from the exercise of stock options and issuance of stock under the Company's Employee stock purchase plan.

In connection with the acquisition of SEG (See Note 2 to the Consolidated Financial Statements) the Company assumed three Yen-denominated bank loans totaling approximately \$22,700,000 bearing interest at rates of between 2.2% and 3.1%.

On June 30, 1998, the Company entered into an unsecured \$150,000,000 bank revolving line of credit agreement that expires June 30, 2001. Advances under the line bear interest at the bank's prime rate or 0.65% to 1.50% over LIBOR. The agreement includes covenants regarding liquidity, profitability, leverage, and coverage of certain charges and minimum net worth and prohibits the payment of cash dividends. On October 23, 1998 and May 14, 1999, certain of the covenants were amended, in part to reflect the acquisition of SEG and change quarterly profitability covenants. The Company is in compliance with the covenants as amended. At September 30, 1999, there were no borrowings outstanding under the facility.

The Company believes that it has sufficient working capital and available bank credit to sustain operations and research and development activities, to the extent such activities are not funded by third parties, and provide for the expansion of its business for the next twelve months.\*

## **Year 2000**

As the Year 2000 approaches, a universal issue has emerged regarding how existing application software programs and operating systems can accommodate date values. The Company has evaluated and continues to evaluate its Year 2000 risk as it exists in three areas: information technology infrastructure, including reviewing what actions are necessary to bring all software tools used internally to Year 2000 compliance; Year 2000 readiness of critical suppliers; and Year 2000 compliance of the products the Company supplies to its customers.

The Company evaluated its information technology infrastructure for Year 2000 compliance, which included reviewing what actions were required to make all internal-use software systems Year 2000 compliant. The Company has completed the modification of its internal-use computer software for the Year 2000. The third party costs associated with such modifications were \$124,000 and were expensed in fiscal 1998. Although the Company believes that the solutions, which were extensively tested, have resulted in its internal-use systems being Year 2000 compliant, there can be no assurance that unforeseen problems that could disrupt operations will not arise, or that the Company will not be required to expend further cost and effort to solve such problems.\*

The Company has contacted its critical suppliers and service providers to ascertain their state of readiness and compliance for Year 2000 issues. Responses have generally indicated substantial remediation, or documented plans to remediate the Year 2000 issue. Some suppliers have given written certification of internal and product compliance. Substantially all critical suppliers have indicated compliance of their products or service. The Company will continue to monitor their progress and compliance for these issues. There can be no assurance, however, that the Company's suppliers and service providers will timely provide the Company with products or services which are Year 2000 compliant. Any failure to do so by such third parties could have a material adverse impact on the Company's results of operations.\*

The Company has evaluated its products and identified those areas containing date sensitive Year 2000 issues. The Company adheres to Year 2000 test case scenarios established by SEMATECH, an industry group comprised of U.S. semiconductor manufacturers. The Company's compliance efforts and review and identification of corrective measures are substantially complete. Based on this review, the Company believes that all products currently being shipped are Year 2000 compliant. The Company has made available for potential sale the necessary modifications to bring previously shipped products into compliance. As all customer events cannot be anticipated, the Company may see an increase in product warranty and other claims.\* In the event that any of the Company's products ultimately are not Year 2000 compliant, or there are customer claims made against the Company, the Company's business, financial condition and results of operations could be adversely affected.\*

The total cost to address the Year 2000 issue has not been and is not expected to be material to the Company's financial condition.\* The Company is using both internal and external resources in its Year 2000 project.\* The Company does not segregate internal costs incurred to assess and remedy deficiencies related to the Year 2000 problem or modifications to its products.

At this time, the Company does not feel it is necessary to develop a contingency plan.\* As risks are identified, plans will be developed and implemented as required.

Although the Company believes its Year 2000 plans will be successful, there can be no assurance that unforeseen problems will not happen which could have a material adverse effect on the Company.\*



## Risks Inherent in the Company's Business

*Fluctuations in Quarterly Results.* The Company has, at times during its existence, experienced quarterly fluctuations in its operating results. Due to the relatively small number of systems sold during each fiscal quarter and the relatively high revenue per system, customer order rescheduling or cancellations, or production or shipping delays can significantly affect quarterly revenues and profitability. The Company has experienced, and may again experience, quarters during which a substantial portion of the Company's net sales are realized near the end of the quarter.\* Accordingly, shipments scheduled near the end of a quarter, which are delayed for any reason, can cause quarterly net sales to fall short of anticipated levels. Since most of the Company's expenses are fixed in the short term, such shortfalls in net sales could have an adverse effect on the Company's business and results of operations.\* The Company's operating results may also vary from quarter to quarter based upon numerous factors including the timing of new product introductions, product mix, level of sales, the relative proportion of domestic and international sales, activities of competitors, acquisitions, international events, currency exchange fluctuations, and difficulties obtaining materials or components on a timely basis.\* In light of these factors, the Company may again experience variability in its quarterly operating results.\*

*Rapid Technological Change; Dependence on New Product Development.* Semiconductor manufacturing equipment and processes are subject to rapid technological change. The Company believes that its future success will depend upon its ability to continue to enhance its existing products and their process capabilities and to develop and manufacture new products with improved process capabilities that enable semiconductor manufacturers to fabricate more advanced semiconductors with increased efficiency.\* The Company is developing Track and Lithography products, and has shipped limited quantities of Thermal products, capable of processing 300mm wafers in anticipation of the industry's transition to this larger wafer standard.\* Failure to successfully introduce these or any other new products in a timely manner would result in the loss of competitive position and could reduce sales of existing products.\* In addition, new product introductions could contribute to quarterly fluctuations in operating results as orders for new products commence and increase the potential for a decline in orders of existing products, particularly if new products are delayed.\*

From time-to-time, the Company has experienced delays in the introduction of its products and product enhancements due to technical, manufacturing and other difficulties and may experience similar delays in the future.\* For example, during fiscal 1996, the Company announced the subsequently terminated 200-APS Track product. Initial shipments of the 200-APS were scheduled to commence during the second quarter of fiscal 1997, and were delayed until the second quarter of fiscal 1998. This delay, as well as industry developments, caused the Company to implement a plan, which was announced on September 30, 1998, to terminate future development and shipments of its 200-APS products, and to concentrate its efforts on completing the ProCell product which had been in development for approximately one year. There can be no assurance that the Company will not experience delays in completing the development or manufacturing problems related to the ProCell product as a result of instability of the design of either the hardware or software elements of the new technology, or be able to efficiently manufacture the new product or other products.\* During June of 1999 the Company introduced the ProCell product for shipment in fiscal 2000. The Company believes that protracted delays in delivering initial quantities of this newly introduced product or any new product to multiple customers could result in semiconductor manufacturers electing to install competitive equipment and could preclude industry acceptance of the ProCell product or any of the Company's products.\* The inability to produce such products or any failure to achieve market acceptance could have a material effect on the Company's business, results of operations and could result in a subsequent loss of future sales.\*

In June of 1999, five participants in the 193-nanometer Development Program decided that their product needs have changed for initial 193-nanometer machines and have withdrawn from the development program and declined delivery of initial tools. These participants withdrew in part due to delays in product introduction and changes in participant's technical requirements. As the Lithography demands continue, the Company is responding by accelerating the development of a very high numerical aperture ("VHNA") version of its 193-nanometer product. In order to address a broader market with this tool, the Company is also redesigning its stage technology to optimize cost of ownership. Although the Company believes that the timing of the introduction of the product will be sufficient to meet volume production requirements of .13 micron, there can be no assurance that the product will be introduced on time or that customers will wait for the product to commit for their production needs.\* The absence of a successful implementation of the product or obtaining sufficient orders for this product could have a material adverse impact on the future profitability of the Company.\*

Semiconductor manufacturers tend to select either a single supplier or a primary supplier for a certain type of equipment. The Company believes that prolonged delays in delivering initial quantities of newly developed products to multiple customers, whether due to the protracted release of product from engineering into manufacturing or due to

manufacturing difficulties, could result in semiconductor manufacturers electing to install competitive equipment in their fabrication facilities and could preclude industry acceptance of the Company's products.\* For example, the Company's largest Track customer has decided to secure deliveries from another source, a decision the Company believes is primarily due to the delay and subsequent termination of the 200-APS. Initial shipments into the market of a new technology Track product, the ProCell, is not expected until fiscal 2000.\* As a result, competitors will increase their market share, and it will be increasingly more difficult for the Company to regain market position.\* The Company's inability to effect the timely production of new products or any failure of these products to achieve market acceptance could have a material adverse effect on the Company's business and results of operations.\*

Historically, the unit cost of the Company's products has been the highest when they are newly introduced into production and cost reductions have come over time through engineering improvements, economies of scale and improvements in the manufacturing process.\* As a result, new products have, at times, had an unfavorable impact on the Company's gross margins and results of operations. There can be no assurance that the initial shipments of new products will not have an adverse effect on the Company's profitability or that the Company will be able to attain design improvements, manufacturing efficiencies or manufacturing process improvements over time.\* Further, the potential unfavorable effect of newly introduced products on profitability can be exacerbated when there is intense price competition in the marketplace.\*

*Competition.* The semiconductor equipment industry is intensely competitive. The Company faces substantial competition both in the United States and other countries in all of its products. The Company's competitors include Tokyo Electron, Ltd. ("TEL") and DaiNippon Screen Mfg. Co., Ltd. in photoresist processing equipment; TEL and Kokusai Electric Co., Ltd. in oxidation/diffusion, LPCVD equipment; in its newly acquired APCVD products from Watkins-Johnson the Company's competitors include Applied Materials and Queseter; and Nikon, Canon, ASM Lithography and other suppliers of photolithography exposure equipment, and projection aligners. The trend toward consolidation in the semiconductor processing equipment industry has made it increasingly important to have the financial resources necessary to compete effectively across a broad range of product offerings, to fund customer service and support on a worldwide basis and to invest in both product and process research and development. Significant competitive factors include technology and cost of ownership, a formula which includes such data as initial price, system throughput and reliability and time to maintain or repair. Other competitive factors include familiarity with particular manufacturers' products, established relationships between suppliers and customers, product availability and technological differentiation. Occasionally, the Company has encountered intense price competition with respect to particular orders and has had difficulty establishing new relationships with certain customers who have long-standing relationships with other suppliers. The Company believes that outside Japan and the Pacific Rim it competes favorably with respect to most of these factors.\* (See "Importance of Japanese and Pacific Rim Markets".)

Many of the Company's competitors are Japanese corporations. Although the economic conditions in Asia are improving, the Company believes that an oversupply of equipment from certain Japanese competitors may continue to cause more severe price competition in its non-Asian markets.\* To compete effectively in these markets, the Company may be forced to reduce prices, which could cause further reduction in net sales and gross margins and, consequently, have a material adverse effect on the Company's financial condition and results of operations.\*

*Customer Concentration.* Historically, the Company has relied on a limited number of customers for a substantial percentage of its net sales. In fiscal 1999, the Company's largest customer accounted for 56% of net sales and no other single customer accounted for 10% or more of net sales. In fiscal 1998, the Company's three largest customers accounted for 40%, 17% and 13% of net sales. The Company believes that, for the foreseeable future, it will continue to rely on a limited number of major customers for a substantial percentage of its net sales.\* As a result of delays in delivering initial quantities of the subsequently terminated 200-APS Track product, one of the Company's largest Track customers has decided to purchase systems with similar capabilities from another supplier. We expect that the decision by such customer to purchase systems from other suppliers and the cancellation of the 200-APS Track product will continue to have an adverse effect on Track product sales in future periods.\* (See "Risks Inherent in the Company's Business—Rapid Technological Change; Dependence on New Product Development"). The loss of any other significant customer or additional reductions in orders by a significant customer, including reductions in orders due to market, economic or competitive conditions in the semiconductor industry, or delays in the introduction of newly developed products and product enhancements will further exacerbate the adverse effect the customer order rescheduling and cancellations discussed above will have on the Company's business and results of operations.\*

*Importance of the Japanese and Pacific Rim Markets.* The Company's customers are heavily concentrated in the United States and Europe. The Japanese and Pacific Rim markets (including fabrication plants located in other parts of the world

which are operated by Japanese and Pacific Rim semiconductor manufacturers) represent a substantial portion of the overall market for semiconductor manufacturing equipment. To date, neither the Company's shipments into Japan nor the Pacific Rim have been significant. The Company believes that the Japanese companies with which it competes have a competitive advantage because their dominance of the Japanese and Pacific Rim semiconductor equipment market provides them with the sales and technology base to compete more effectively throughout the rest of the world. The Company is not engaged in any significant collaborative effort with any Japanese or Pacific Rim semiconductor manufacturers. As a result, the Company may be at a competitive disadvantage to the Japanese equipment suppliers that are engaged in such collaborative efforts with Japanese and Pacific Rim semiconductor manufacturers. The Company believes that it must substantially increase its share of these markets if it is to compete as a global supplier.\* Further, in many instances, Japanese and Pacific Rim semiconductor manufacturers fabricate devices such as dynamic random access memory devices ("DRAMs"), with potentially different economic cycles than those affecting the sales of devices manufactured by the majority of the Company's U.S. and European customers. Failure to secure customers in these markets may limit the global market share available to the Company and may increase the Company's vulnerability to industry or geographic downturns.\*

In the past, several of the Company's larger customers have entered into joint ventures ("JV") with European, Japanese or Pacific Rim semiconductor manufacturers. In such cases, the Company has encountered intense price competition from foreign competitors who are suppliers to the non-U.S. member of the JV. Further, in certain instances the Company has not secured the equipment order when the non-U.S. member has had the responsibility for selecting the equipment to be used by the JV in its U.S. operations. There can be no assurance that as the Company's customers form additional alliances, whether in the U.S. or in other parts of the world, that the Company will be successful in obtaining equipment orders or that it will be able to obtain orders with sufficient gross margin to generate profitable transactions, either of which could have an adverse effect on the Company's results of operations.\*

Throughout the Pacific Rim, the Company is attempting to compete with major equipment suppliers having significant market share and established service and support infrastructures in place. The Company has invested in the staffing and facilities that it believes are necessary to sell, service and support customers in the Pacific Rim and with the acquisition of SEG, the Company acquired from Watkins-Johnson Company a 36,000 square foot customer demonstration facility in Kawasaki City, Japan. However, the Company anticipates that it will continue to encounter significant price competition as well as competition based on technological ability.\* There can be no assurance that the Company's Pacific Rim operations will be profitable, even if it is successful in obtaining significant sales into this region.\* Further, due to recent economic issues in certain Asian countries, particularly Korea, the Company's ability to penetrate such markets has been more difficult. Failure to secure customers in these markets would have an adverse effect on the Company's business and results of operations.\*

Due to the high cost of building, equipping and maintaining fabrication facilities, many customers are outsourcing their manufacturing to foundries, many of which are located in Taiwan. Although the Company is focused on increasing its penetration into Taiwan, it has had limited success in securing volume orders from companies in this area, which have long standing relationships with the Company's competitors. If the Company is not successful in penetrating this market, it could have an adverse effect on the Company's net sales and results of operations.\*

*Risks Associated with Acquisition of Watkins-Johnson Company's Semiconductor Equipment Group.* On July 6, 1999, the Company completed the acquisition of the Semiconductor Equipment Group ("SEG") of Watkins-Johnson. The acquisition of the assets of SEG is accompanied by a variety of risks, which could prevent the Company from realizing any significant benefits from the transaction. The Company may experience difficulty with integrating the operations and personnel of the business acquired from Watkins-Johnson, need additional financial resources to fund the operations of the acquired business, be unable to maximize the Company's financial and strategic position by the incorporation or development of the acquired technology and products or lose key employees of the acquired business. In particular, the Company believes it must successfully transition the acquired technology of SEG to incorporate process improvements such as single wafer processing and scalability from 200mm to 300mm wafer processing capability.\* There can be no assurance that the Company will not experience difficulties or delays in transitioning this technology which could have a material adverse effect on the Company.\*

The acquisition of SEG also included the assumption of certain liabilities of SEG, which may prove more costly than the Company anticipates. For example, certain environmental remediation steps have been put in place at the site, there can be no assurance that additional environmental hazards or liabilities will not surface which may have an adverse impact on the Company's business.\* In order to successfully integrate SEG, the Company must, among other things, continue to attract and retain key personnel, integrate the acquired products, technology and information systems from engineering, sales, product

development and marketing perspectives, and consolidate functions and facilities, which may result in future charges to streamline the combined operations. Difficulties encountered in the integration of SEG may have a material adverse effect on the Company.\*

*Business Interruption.* The Company manufactures its Track products in San Jose, California and substantially all of its Thermal products in Orange and Scotts Valley, California. Tinsley's optical components are manufactured in Richmond and North Hollywood, California. These California facilities are located in seismically active regions. SVGL's photolithography exposure products are manufactured in Wilton and Ridgefield, Connecticut. If the Company were to lose the use of one of its facilities as a result of an earthquake, flood or other natural disaster, the resultant interruptions in operations would have a material adverse effect on the Company's results of operations and financial condition.\*

*Euro Conversion.* On January 1, 1999, 11 of the 15 member countries of the European Union established fixed conversion rates between each of their existing sovereign currencies and the Single European Currency. The participating countries adopted the Euro as their common legal currency on that date, with a transition period through January 2002 regarding certain elements of the Euro change. In January 1999, the Company implemented changes to its internal systems to make them Euro capable. The cost of system modifications to date has not been material, nor are future system modifications expected to be material.\* The Company does not expect the transition to, or use of, the Euro to have a material adverse effect on the Company's results of operations and financial condition.\*

*Environmental Matters.* The Company is subject to a number of governmental regulations related to the discharge or disposal of toxic and hazardous chemicals used in the manufacture of certain of the Company's products. The Company believes that it is in general compliance with these regulations and that it has obtained or expects to obtain shortly all necessary environmental permits to conduct its business.\* The failure to comply with present or future regulations could result in fines or penalties being assessed against the Company, interruption of production or reduction in the Company's customers accepting its products.\*

The Scotts Valley, California facility is subject to an environmental remediation plan being monitored by various governmental agencies. Watkins-Johnson Company purchased a guaranteed fixed price remediation contract from a third party environmental consultant to remediate the groundwater contamination at the facility. The remediation agreement (which includes insurance policies covering performance of the environmental consultant and coverage for undiscovered contamination) obligates the third party to perform all of the obligations and responsibilities of Watkins-Johnson Company. There can be no assurance that the third party consultant will have the financial resources or technical expertise to execute under the remediation agreement.\* It is not inconceivable that environmental regulatory agencies could ultimately look to the Company to remediate the groundwater contamination at the site.\*

In August 1996, the Company purchased from Perkin-Elmer, approximately 50 acres of land and a 201,000 square foot building thereon (the "Property") located in Ridgefield, Connecticut. At the time the Company purchased the Property, it was aware that certain groundwater and soil contamination was present and that the Property was subject to a clean-up order being performed by Perkin-Elmer under the jurisdiction of the Connecticut Department of Environmental Protection. Agreements between the Company and Perkin-Elmer provide that Perkin-Elmer has sole responsibility for all obligations or liabilities related to the clean-up order. While the Company believes that it has been adequately indemnified, if for some reason Perkin-Elmer was unable to comply or did not comply with the clean-up order, the Company could be required to do so.\*

The Company does not anticipate any material capital expenditures for environmental control facilities in 2000.\*

*SVGL—Uncertain Market for Micrascan Products.* The Company believes that the photolithography exposure equipment market is one of the largest segments of the semiconductor processing equipment industry.\* To address the market for advanced photolithography exposure systems, the Company has invested and expects to continue to invest substantial resources in SVGL's Micrascan technology and its family of Micrascan DUV step-and-scan photolithography systems, eventually capable of producing line widths of .10 micron and below. The development of a market for the Company's Micrascan step-and-scan photolithography products will be highly dependent on the continued trend towards finer line widths in integrated circuits and the ability of other lithography manufacturers to keep pace with this trend through either enhanced technologies or improved processes.\* The Company believes DUV lithography is required to fabricate devices with line widths below 0.3 micron.\* Semiconductor manufacturers can purchase DUV steppers to produce product at .25 micron line widths. However, the Company believes that as devices increase in complexity and size and require finer line widths, the technical advantages of DUV step-and-scan systems, as compared to DUV steppers, will enable semiconductor manufacturers

to achieve finer line widths with improved critical dimension control which will result in higher yields of faster devices.\* The Company also believes that the industry transition to DUV step-and-scan systems has accelerated in calendar 1999 and that advanced semiconductor manufacturers are beginning to require volume quantities of production equipment as advanced as the current and pending versions of Micrascan to produce both critical and to some degree sub-critical layers of semiconductor devices.\* Currently, competitive DUV step-and-scan equipment capable of producing .25 micron line widths and below is available in limited quantities from three competitors.\* Further, if manufacturers of DUV steppers are able to further enhance existing technology to achieve finer line widths sufficiently to erode the competitive and technological advantages of DUV step-and-scan systems, or other manufacturers of step-and-scan systems are successful in supplying sufficient quantities of product in a timely manner that are technically equal to or better than the Micrascan, demand for the Micrascan technology may not develop as the Company expects.\*

The Company believes that advanced logic devices, DRAMs and ASICs will require increasingly finer line widths.\* Consequently, SVGL must continue to develop advanced technology equipment capable of meeting its customers' current and future requirements while offering those customers a progressively lower cost of ownership.\* In particular, the Company believes that it must continue its development of future systems capable of printing line widths finer than .10 micron and processing 300mm wafers.\* Any failure by the Company to develop the advanced technology required by its customers at progressively lower costs of ownership and supply sufficient quantities to a worldwide customer base could have a material adverse impact on the Company's financial condition and results of operations.\*

The Company believes that for SVGL to succeed in the long term, it must sell its Micrascan products on a global basis. The Japanese and Pacific Rim markets (including fabrication plants located in other parts of the world which are operated by Japanese and Pacific Rim semiconductor manufacturers as well as foundries located primarily in Taiwan) represent a substantial portion of the overall market for photolithography exposure equipment. To date, the Company has not been successful in penetrating either of these markets. (See "Importance of the Japanese and Pacific Rim Markets").

*SVGL—Need to Increase Manufacturing Capacity and System Output.* The Company believes that its ability to supply systems in volume to multiple customers will be a major factor in customer decisions to commit to the Micrascan technology.\* Based upon the expected transition from steppers to step-and-scan equipment for photolithography equipment, and potential future demand for advanced lithography products, the Company has been in the process of increasing SVGL's production capacity. In August 1996, as part of this expansion, the Company purchased from The Perkin-Elmer Corporation a 243,000 square foot facility (subsequently increased by the Company to 276,000 square feet) occupied by SVGL in Wilton, Connecticut and an additional 201,000 square foot building, which SVGL now occupies, in Ridgefield, Connecticut. The Company has invested in significant capital improvements related to the buildings purchased and the equipment required to expand the production capabilities of SVGL. While the Company has essentially completed its facility expansion activities, it has not invested in all of the metrology and other equipment required to maximize manufacturing capacity. However, the Company plans to continue increasing capacity to produce optical components, thus enabling it to quickly respond to customer requirements.\* Once demand recovers, the timely equipping of facilities to successfully complete the increase in capacity will require the continued recruitment, training and retention of a high quality workforce, as well as the achievement of satisfactory manufacturing results on a scale greater than SVGL has attempted in the past. There can be no assurance that demand will recover or, that if it does, that the Company can manage these efforts successfully. Any failure to successfully manage such efforts could result in product delivery delays and a subsequent loss of future revenues. In particular, the Company believes that protracted delays in delivery quantities of current and future Micrascan products could result in semiconductor manufacturers electing to install competitive equipment in their advanced fabrication facilities, which could impede acceptance of the Micrascan products on an industry-wide basis.\* This could result in the Company's operating results being adversely affected by the increase in fixed costs and operating expenses related to increases in production capacity if net sales, for any reason, do not increase commensurately.\*

The time required to build a Micrascan system is significant. If SVGL is to be successful in supplying increased quantities of Micrascan systems, it will not only need to be able to build more systems, it will need to build them faster.\* SVGL will require additional trained personnel, additional raw materials and components and improved manufacturing and testing techniques to both facilitate volume increases and shorten manufacturing cycle time.\* To that end, SVGL is continuing to develop its vendor supply infrastructure, and implement manufacturing improvements.\* Additionally, the Company believes that as it increases its penetration of the Micrascan product, it must resume increasing its factory, field service and technical support organization staffing and infrastructure to support the anticipated customer requirements.\* There can be no assurance that the Company will not experience manufacturing difficulties or encounter problems in its attempt to increase production and upgrade or expand existing operations.\*

One of the most critical components of the Micrascan systems is the projection optics, which are primarily manufactured by SVGL. As part of its overall investment in capacity, the Company has increased SVGL's optical manufacturing floor space. The Company believes that in order for SVGL to be a viable supplier of advanced lithography systems in the future, it must successfully reduce the cycle times required to build projection optics.\*

In November 1997, the Company acquired Tinsley Laboratories, Inc. ("TLI") in exchange for approximately 1,091,000 shares of Company common stock. TLI designs, manufactures and sells precision optical components, assemblies and systems to customers in a variety of industries and research endeavors. The primary reasons for the acquisition were TLI's technology and expertise relating to aspherical lenses, a key component of SVGL's photolithography products, the adaptation of certain of TLI's manufacturing processes by SVGL and TLI's commencement of the fabrication of non-aspherical lenses which are currently produced by SVGL. However, there can be no assurance that TLI's manufacturing technology is scaleable, or that such expertise can be transferred without substantial time or expense, if at all.\* The inability of SVGL to transfer this production technology for use in processes of a substantially larger scale or the inability of TLI to manufacture non-aspherical lenses for SVGL in sufficient quantities to realize efficiencies of scale could adversely affect the Company's ability to realize any significant benefits from the acquisition of TLI.\*

The Company believes that protracted delays in delivering quantities of both current and future generations of Micrascan products to multiple worldwide customers could result in semiconductor manufacturers electing to install competitive equipment in their advanced fabrication facilities, and could preclude industry acceptance of the Micrascan technology and products.\* In addition, the Company's operating results could also be adversely affected by the increase in fixed costs and operating expenses related to increases in production capacity and field service and technical support activities if net sales do not increase commensurately.\*

*SVGL—Sole Source Materials and Components.* Most raw materials and components not produced by the Company are available from more than one supplier. However, certain raw materials, components and subassemblies are obtained from single sources or a limited group of suppliers. Although the Company seeks to reduce its dependence on these sole and limited source suppliers, and the Company has not experienced significant production delays due to unavailability or delay in procurement of component parts or raw materials to date, disruption or termination of certain of these sources could occur and such disruptions could have at least a temporary adverse effect on the Company's business and results of operations.\* Moreover, a prolonged inability to obtain certain components could have a material adverse effect on the Company's business and results of operations and could result in damage to customer relationships.\*

The raw material for a proprietary component of the optical system for the Micrascan is available from only one supplier. The supplier has expanded its capacity to meet SVGL's projected long-term requirements and has created and stored agreed upon quantities of safety stock. There can be no assurance that the supplier will be able to provide acceptable quantities of material required by SVGL.\* Additionally, a version of the Company's Micrascan III photolithography system utilizes an Excimer laser that is manufactured in volume by only one supplier. In fiscal 1999 SVGL qualified an additional source of lasers for its current and future versions of Micrascan products, allowing the potential for the integration of such lasers into its system configurations.\* However, there can be no assurance that its customers will be receptive to procuring products with lasers from this supplier, or the supplier will be able to provide product of sufficient quantity and quality.\* If these suppliers were unable to meet their commitments, SVGL would be unable to manufacture the quantity of products required to meet the anticipated future demand, which would have a material adverse effect on the Company's business and results of operations.\*

It is anticipated that a critical component of the optical system for the 157-nanometer lithography product, which is currently under development, will utilize Calcium Fluoride.\* Calcium Fluoride is a raw material that has been known to be in short supply and is integral to the production of optics capable of producing quality line widths of .10 and below. The Company has or will shortly qualify three suppliers who could be sources of this raw material for the Company.\* There can be no assurance that these suppliers will be able to supply the quality or quantity of the product necessary for the Company to meet expected future demand, which could have a material adverse effect on the Company's business and results on operations.

*SVGL—Research and Development Funding.* Historically, the Company has depended on external funding to assist in the high cost of development in its photolithography operation. Beginning in fiscal 1996, the Company entered into agreements with certain customers (the "Participants") whereby each agreed to assist in funding the Company's development of an advanced technology 193-nanometer Micrascan system. In exchange for such funding, each Participant received the right to purchase one such system and, in addition, received a right of first refusal (ratable among such Participants) to all

such machines manufactured during the first two years following the initial system shipments. For each initial system ordered, each Participant agreed to fund \$5,000,000 in such development costs. The agreements call for each Participant to pay \$1,000,000 of initial development funding and four subsequent payments of \$1,000,000 upon the completion of certain development milestones. The Participants may withdraw from the development program without penalty, but payments made against completed development milestones are not refundable and all rights to future equipment are forfeited. At September 30, 1999, the Company had received and recognized \$20,000,000 in funding from program Participants against research and development expenditures. Three competitors of the Company have either announced the development of, or have shipped 193-nanometer products. In June 1999, certain Participants decided that their product needs have changed for initial 193-nanometer machines and have withdrawn from the program and chosen to use or are evaluating other solutions. At September 30, 1999, the Company's obligations under these agreements are complete and no additional funding is expected or required from the Participants.\*

In May 1999, the Company entered into an agreement with Intel Corporation ("Intel") for the development of 157-nanometer lithography technology. This agreement obligates the Company among other things to develop and sell to Intel a predetermined number of initial tools. Intel has agreed to provide advanced payments for the development and manufacture of these machines, based upon predetermined milestones. Separately, Intel has invested approximately \$15,000,000 in the Company in the form of a purchase of Series 1 Convertible Preferred Stock (see Note 11 to the Consolidated Financial Statements). The Company is obligated to dedicate a certain amount of its 157-nanometer unit production output to Intel. The Company is required to use the proceeds from the Series 1 Preferred investment and funds received under the agreement for the development of technology for use on 157-nanometer lithography equipment. There can be no assurance that the Company will be successful in developing 157-nanometer technology or will be able to manufacture significant quantities of machines to satisfy its obligations to Intel or other customers.\* There is no assurance that the Company will receive all funding which it currently anticipates or that it will be able to obtain future outside funding beyond that which it is currently receiving, and any failure to do so could have a material adverse impact on the Company's results of operations.\* If the Company were required to use its own funds, its research and development expenses would increase and its operating income would be reduced correspondingly.

*SVGL—Market Penetration.* The Company believes that for SVGL to succeed in the long term, it must expand its customer base and sell its Micrascan products on a global basis.\* The Japanese market (including fabrication plants operated outside Japan by Japanese semiconductor manufacturers), the Taiwanese market and the Korean market represent a substantial portion of the overall market for photolithography exposure equipment. To date, the Company has not been successful penetrating any of these markets. Economic difficulties in certain Asian economies, particularly Korea, may adversely effect the Company's ability to penetrate such markets.\*

*SVGL—Future Profitability.* If SVGL is to attain its objective of being a volume supplier of advanced photolithography products to multiple customers, the Company believes that it must expand its customer base to include additional customers from whom it secures and successfully fulfills orders for production-quantities of Micrascan products.\* The Company believes that in light of the recent downturn in industry demand, costs associated with the continued development of the Micrascan technology, the expansion of SVGL's manufacturing capacity, the related increase in manpower and customer support, increased competition and the potential difficulties inherent in developing and manufacturing sub-.25 micron Micrascan products, in particular the projection optics required for these products, there can be no assurance that SVGL will be able to operate profitably in the future.\*

*Dependence on Key Personnel.* The Company's future success will continue to depend to a large extent on the continued contributions of its executive officers and key management and technical personnel. In particular, SVGL's future growth is very dependent on the Company's ability to attract and retain key skilled employees, particularly those related to the optical segment of its business. The Company is a party to agreements with each of its executive officers to help ensure the officers' continual service to the Company in the event of a change-in-control. Each of the Company's executive officers, and key management and technical personnel would be difficult to replace. The loss of the services of one or more of the Company's executive officers or key personnel, or the inability to continue to attract qualified personnel could delay product development cycles or otherwise have a material adverse effect on the Company's business, financial condition and results of operations.\*

*Legal Proceedings.* On or about August 12, 1998, Fullman International Inc. and Fullman Company LLC (collectively, "Fullman") initiated a lawsuit in the United States District Court for the District of Oregon alleging claims for fraudulent conveyance, constructive trust and declaratory relief in connection with a settlement the Company had previously entered into resolving its claims against a Thailand purchaser of the Company's equipment. In its complaint against the Company, Fullman,

allegedly another creditor of the Thailand purchaser, alleges damages of approximately \$11,500,000 plus interest. The Company has successfully moved to transfer the case to the United States District Court for the Northern District of California. The trial is tentatively scheduled for July 2000.

While the outcome of such litigation is uncertain, the Company believes it has meritorious defenses to the claims and intends to conduct a vigorous defense. However, an unfavorable outcome in this matter could have a material adverse effect on the Company's financial condition.\*

On July 8, 1999, the Company filed a complaint for copyright infringement to protect its investment and intellectual property from six third party vendors ("the Defendants") subsequently complaints against two of the Defendants were withdrawn by the Company. The complaint was filed against the Defendants alleging that the named defendants have infringed upon certain copyrights owned by the Company on its 8X series equipment by duplicating or modifying software in the refurbishment and sale of replacement boards. The complaint further asks for preliminary and permanent injunction against the Defendants' further infringement of the Company's copyrights and sale of infringing systems and boards, and for an award of damages. One of the Defendants has filed a counterclaim against the Company in response to the Company's complaint.

In addition to the above, the Company, from time to time, is party to various legal actions arising out of the normal course of business, none of which is expected to have a material effect on the Company's financial position or operating results.\*

*Recently Issued Accounting Pronouncements.* In June 1998 and June 1999, the Financial Accounting Standards Board ("FASB") issued SFAS 133, "Accounting for Derivative Instruments and Hedging Activities" and SFAS No. 137, "Accounting for Derivative Instruments and Hedging Activities – Deferral of the Effective Date of FASB Statement No. 133." These statements require companies to record derivatives on the balance sheet as assets or liabilities, measured at fair value. Gains or losses resulting from changes in the values of those derivatives would be accounted for depending on the use of the derivative and whether it qualifies for hedge accounting. The Company is required to adopt SFAS 133 for the fiscal year ending September 30, 2002. Although the Company has not fully assessed the impact of adoption, management believes that the adoption of these statements will not have a significant impact on its financial results.\*

In December 1999, the Securities and Exchange Commission ("SEC") released Staff Accounting Bulletin No. 101 ("SAB101"). SAB 101 summarizes certain interpretations and practices followed by the Division of Corporation Finance and the Office of the Chief Accountant of the SEC in administering the disclosure requirements of the Federal securities laws in applying generally accepted accounting principles to revenue recognition in financial statements. Although the company has not fully assessed the impact of adoption, management believes that applying the guidance in this bulletin will not have a significant impact on its financial statements.\*

#### **Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

The Company is exposed to financial market risks, including changes in foreign currency exchange rates and interest rates. The Company attempts to minimize its currency fluctuation risk by actively managing the balances of current assets and liabilities denominated in foreign currencies. A 10% change in the foreign currency exchange rates would not have a material impact on the Company's results of operations. During fiscal 1999 the Company did not use foreign currency hedging transactions, however it is the Company's intent during fiscal 2000 to sell forward contracts in Japanese Yen in order to hedge foreign currency exposures.\*

At September 30, 1999 the Company had investments in marketable debt securities that are subject to interest rate risk (See Note 4 to the Consolidated Financial Statements). However, due to the short-term nature of the Company's debt investments and the Company's ability to hold its fixed income investments to maturity the impact of a 10% interest rate change would not have a material impact on the value of such investments.\*

At September 30, 1999 fixed rate debt obligations totaled \$28,410,000 (See Note 8 to the Consolidated Financial Statements). The fixed rate obligations range between 2.2% to 12% with a weighted average of 3.93% and maturity dates through February 2011. Certain of the Company's manufacturing facilities are leased under operating lease agreements under which the monthly rent payments adjust based on LIBOR. Monthly rent payments are variable at 0.75% to 2.0% over LIBOR. For one of the leases, the Company has entered into an interest rate swap contract to fix the interest rate and therefore, the lease payment. For the other lease, the Company has income and cash flow exposure to the extent that LIBOR changes. The impact of a 10% change in interest rates would not have a material impact on the amount of lease payment.



**Item 8. *Financial Statements and Supplementary Data.***

Consolidated Financial Statements Included in Item 8:

	<u>Page</u>
Independent Auditors' Report	32
Consolidated Balance Sheets at September 30, 1998 and 1999	33
Consolidated Statements of Operations for the Years Ended September 30, 1997, 1998 and 1999	34
Consolidated Statements of Stockholders' Equity and Comprehensive Income (Loss) for the Years Ended September 30, 1997, 1998 and 1999	35
Consolidated Statements of Cash Flows for the Years Ended September 30, 1997, 1998 and 1999	36
Notes to Consolidated Financial Statements	37
Schedule for each of the three years in the period ended September 30, 1999 included in Item 14(a): II—Valuation and Qualifying Accounts and Reserves	53

Schedules other than those listed above have been omitted since the required information is not present or not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements or the notes thereto.

## INDEPENDENT AUDITORS' REPORT

Board of Directors and Stockholders of  
Silicon Valley Group, Inc.:

We have audited the accompanying consolidated balance sheets of Silicon Valley Group, Inc. and its subsidiaries as of September 30, 1998 and 1999 and the related consolidated statements of operations, stockholders' equity and comprehensive income (loss), and cash flows for each of the three years in the period ended September 30, 1999. Our audits also included the consolidated financial statement schedule listed in Item 14.(a)2. These financial statements and the financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on the financial statements and financial statement schedule based on our audits.

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

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Silicon Valley Group, Inc. and its subsidiaries at September 30, 1998 and 1999, and the results of their operations and their cash flows for each of the three years in the period ended September 30, 1999, in conformity with generally accepted accounting principles. Also, in our opinion, such consolidated financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

/s/ DELOITTE & TOUCHE LLP  
Deloitte & Touche LLP

San Jose, California  
October 25, 1999

**SILICON VALLEY GROUP, INC.**  
**CONSOLIDATED BALANCE SHEETS**

	September 30	
(in thousands, except share and per share amounts)	1998	1999
<b>ASSETS</b>		
Current Assets:		
Cash and equivalents	\$121,575	\$ 98,278
Short-term investments	28,425	43,968
Accounts receivable (net of allowance for doubtful accounts of \$8,232 and \$5,038, respectively)	121,562	153,981
Refundable income taxes	15,000	2,500
Inventories	212,975	200,769
Prepaid expenses and other assets	7,485	9,826
Deferred income taxes	22,740	35,489
Total current assets	529,762	544,811
Property and equipment, net	191,022	198,403
Deposits and other assets	6,070	8,299
Intangible assets, net	3,736	3,260
Total	\$730,590	\$754,773
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current Liabilities:		
Accounts payable	\$ 25,346	\$ 34,202
Accrued liabilities	130,532	123,266
Current portion of long-term debt	640	1,620
Income taxes payable	1,284	3,568
Total current liabilities	157,802	162,656
Long-term debt	5,865	26,790
Deferred and other liabilities	5,393	7,790
Commitments (See Notes 9, 13, 14 and 17)	—	—
Stockholders' Equity:		
Convertible preferred stock—\$0.01 par value, Shares authorized: 1,000,000; shares outstanding: 1998: none; 1999: 15,000	—	14,976
Common stock—\$0.01 par value, shares authorized: 100,000,000; shares outstanding: 1998: 32,696,394; 1999: 33,333,884	404,462	410,068
Retained earnings	160,384	134,928
Accumulated other comprehensive loss	(3,316)	(2,435)
Total stockholders' equity	561,530	557,537
Total	\$730,590	\$754,773

See Notes to Consolidated Financial Statements.

**SILICON VALLEY GROUP, INC.**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

(in thousands, except per share amounts)	Years Ended September 30		
	1997	1998	1999
Net sales	\$614,226	\$608,625	\$473,690
Cost of sales:			
Cost of net sales	378,114	389,279	312,319
Restructuring charges	—	19,117	—
Gross profit	236,112	200,229	161,371
Operating expenses:			
Research, development and related engineering	74,311	87,272	94,698
Marketing, general and administrative	134,642	130,615	109,819
Settlement of royalty obligation	32,582	—	—
Restructuring and related charges	—	14,563	(506)
Operating loss	(5,423)	(32,221)	(42,640)
Interest and other income	10,639	6,082	6,509
Interest expense	(1,018)	(1,018)	(1,305)
Income (loss) before income taxes and minority interest	4,198	(27,157)	(37,436)
Provision (benefit) for income taxes	1,514	(13,580)	(11,980)
Minority interest	92	—	—
Net income (loss)	\$ 2,592	\$ (13,577)	\$ (25,456)
Net income (loss) per share—basic	\$ 0.08	\$ (0.42)	\$ (0.77)
Shares used in per share computations—basic	31,635	32,438	32,926
Net income (loss) per share—diluted	\$ 0.08	\$ (0.42)	\$ (0.77)
Shares used in per share computations—diluted	32,414	32,438	32,926

See Notes to Consolidated Financial Statements.

**SILICON VALLEY GROUP, INC.**  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY**  
**AND COMPREHENSIVE INCOME (LOSS)**

(in thousands except shares)	Convertible Preferred stock		Common stock		Retained Earnings	Accumulated Other Comprehensive	Total
	Shares	Amount	Shares	Amount		Income (Loss)	
Balances, October 1, 1996	—	—	31,199,148	\$379,553	\$171,817	\$ (128)	\$551,242
Stock issued in settlement of royalty obligation			489,296	9,994			9,994
Stock options exercised			372,464	3,853			3,853
Employee stock purchase plan			216,709	3,753			3,753
Tax benefit of stock option transactions				2,532			2,532
Adjustment to conform TLI fiscal year			(5,275)	(22)			(22)
Components of comprehensive income:							
Net income					2,592		2,592
Cumulative translation adjustment						(240)	(240)
Pension liability						(146)	(146)
Adjustment to conform TLI fiscal year					(448)		(448)
Total comprehensive income							1,758
Balances, September 30, 1997	—	—	32,272,342	399,663	173,961	(514)	573,110
Stock options exercised			158,254	866			866
Employee stock purchase plan			265,798	3,196			3,196
Tax benefit of stock option transactions				737			737
Components of comprehensive loss:							
Net loss					(13,577)		(13,577)
Cumulative translation adjustment						(2,802)	(2,802)
Total comprehensive loss							(16,379)
Balances, September 30, 1998	—	—	32,696,394	404,462	160,384	(3,316)	561,530
Stock options exercised			214,659	1,444			1,444
Employee stock purchase plan			422,831	3,496			3,496
Tax benefit of stock option transactions				357			357
Stock compensation				309			309
Sale of convertible preferred stock, net of \$24 in issuance costs	15,000	\$14,976					14,976
Components of comprehensive loss:							
Net loss					(25,456)		(25,456)
Cumulative translation adjustment						574	574
Change in unrealized gain on investments						345	345
Pension liability						(38)	(38)
Total comprehensive loss							(24,575)
Balances, September 30, 1999	<u>15,000</u>	<u>\$14,976</u>	<u>33,333,884</u>	<u>\$410,068</u>	<u>\$134,928</u>	<u>\$(2,435)</u>	<u>\$557,537</u>

See Notes to Consolidated Financial Statements.

**SILICON VALLEY GROUP, INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

(in thousands)	Years Ended September 30		
	1997	1998	1999
<b>Cash Flows from Operating Activities:</b>			
Net income (loss)	\$ 2,592	\$ (13,577)	\$ (25,456)
Reconciliation to net cash provided by operating activities:			
Depreciation and amortization	27,605	39,171	48,690
Settlement of royalty obligation	27,582	—	—
Amortization of intangibles	751	848	476
Deferred income taxes	948	(17,150)	(11,620)
Stock compensation	—	—	309
Adjustment to conform TLI fiscal year	(470)	—	—
Minority interest	92	—	—
Changes in assets and liabilities:			
Accounts receivable	(14,250)	24,232	(32,419)
Refundable income taxes	—	(15,000)	12,500
Inventories	(13,249)	15,478	26,318
Prepaid expenses and other assets	(120)	22	(819)
Deposits and other assets	(1,159)	373	(2,502)
Accounts payable	7,481	(18,361)	3,507
Accrued liabilities	(9,350)	5,617	(16,366)
Income taxes payable	(3,416)	769	315
Net cash provided by operating activities	25,037	22,422	2,933
<b>Cash Flows from Investing Activities:</b>			
Purchases of short-term investments, available for sale	(109,872)	(10,190)	(54, 773)
Maturities of short-term investments, available for sale	76,120	58,737	39,575
Purchases of property and equipment	(89,932)	(79,208)	(30,937)
Net cash received from SEG acquisition (See Note 2)	—	—	139
Purchase of minority interest in subsidiary	(3,000)	—	—
Net cash used for investing activities	(126,684)	(30,661)	(45,996)
<b>Cash Flows from Financing Activities:</b>			
Sale of preferred stock	—	—	14,976
Sale of common stock	7,332	4,799	4,940
Proceeds from borrowings	6,462	250	—
Repayment of debt	(1,406)	(2,108)	(860)
Net cash provided by financing activities	12,388	2,941	19,056
Effect of Exchange Rate Changes on Cash	(839)	(2,816)	710
Decrease in cash and equivalents	(90,098)	(8,114)	(23,297)
Cash and equivalents:			
Beginning of year	219,787	129,689	121,575
End of year	\$129,689	\$121,575	\$ 98,278
<b>Non-Cash Investing and Financing Activities:</b>			
Common stock issued in settlement of royalty obligation	\$ 9,994	\$ —	\$ —
Tax benefit of stock option transactions	\$ 2,532	\$ 737	\$ 357

See Notes to Consolidated Financial Statements.

**SILICON VALLEY GROUP, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**NOTE 1. THE COMPANY AND SIGNIFICANT ACCOUNTING POLICIES**

*Line of Business.* Silicon Valley Group, Inc. (the Company) primarily designs, manufactures, markets and services semiconductor wafer processing equipment used in the fabrication of integrated circuits.

*Certain Risks and Uncertainties.* The semiconductor industry is highly cyclical and has, historically, experienced periodic downturns that have had a severe effect on the industry's demand for semiconductor wafer processing equipment. Any future such downturns are likely to have an adverse effect on the Company's results of operations.

The Company relies on a limited number of major customers for a substantial percentage of its net sales. The loss of or any substantial reduction or rescheduling of orders by any such customer could adversely affect the Company's business and results of operations.

*Concentration of Credit Risk.* Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of investments and trade receivables. The Company places its cash equivalents and short-term investments in high-grade instruments, which it places for safe keeping with high-quality financial institutions. Further, by policy, it limits the amount of credit exposure with any one counterparty and the amount of total investment through any one financial institution or in any one type of investment.

The Company sells its systems to both domestic and international semiconductor manufacturers. The Company performs ongoing credit evaluations of its customers' financial condition and, generally, requires no collateral from its customers. The Company maintains an allowance for uncollectible accounts receivable. The combined receivables at September 30, 1999 for the Company's top five revenue-generating customers in fiscal 1999 total approximately \$108,000,000.

*Use of Estimates.* The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. The Company regularly assesses those estimates and, while actual results may differ, management believes that the estimates are reasonable.

*Principles of Consolidation.* The Consolidated Financial Statements include the accounts of the Company and its wholly-owned subsidiaries, after elimination of significant intercompany transactions and balances.

The functional currency for the majority of the Company's subsidiaries is the U.S. dollar, and for such subsidiaries, foreign exchange gains and losses are included in net income (loss) and were not significant in any of the periods presented. For two subsidiaries, the functional currency is the local currency, and for these subsidiaries, remeasurement gains and losses are included in a separate component of stockholders' equity. Certain intercompany receivables from two subsidiaries have been classified as long term and the cumulative translation adjustments related to these receivables are presented as a separate component of stockholders' equity.

*Cash Equivalents.* Cash and equivalents consist of highly liquid investments with a maturity date at acquisition of three months or less. Cash and equivalents are stated at cost, plus any accrued interest, which approximates fair value.

*Inventories.* Inventories are stated at the lower of cost (which approximates first-in, first-out) or market.

**SILICON VALLEY GROUP, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

*Property and Equipment.* Property and equipment are stated at cost. Depreciation is computed on the straight-line method over the estimated useful lives of the assets. Estimated useful lives are as follows:

	Years
Land improvements	15
Buildings and improvements	35 to 40
Machinery and equipment	2 to 10
Furniture and fixtures	2 to 10
Leasehold improvements	Shorter of the estimated useful life or the lease term

*Intangible Assets.* Intangible assets are amortized on a straight-line basis over their estimated lives as follows: goodwill, twenty-five years; purchased technology, six years.

*Revenue Recognition.* The Company generally recognizes revenue from the sale of equipment upon shipment and transfer of title. During fiscal 1999, the Company recognized net sales of approximately \$20,000,000 from a customer who accepted and took title to the related equipment and agreed to normal payment terms, but requested that the Company store the equipment until predetermined shipment dates. Approximately \$58,000,000 in revenue to two such customers was recognized in fiscal 1998. At September 30, 1999 the Company was storing \$1,500,000 of such equipment with a scheduled shipment date of March 2000.

Product liability and installation costs are accrued in the period that sales are recognized.

*Research, Development and Related Engineering.* Research, development and related engineering costs are expensed as incurred. Funds received under development funding arrangements are recorded as a reduction to such expenses as earned (See Note 14). The Company's products include certain software applications that are integral to the operation of the product. The costs to develop such software have not been capitalized as the Company believes its current software development process is essentially completed concurrent with the establishment of technological feasibility of the software and/or development of the related hardware.

*Net Income (Loss) Per Share.* Effective October 1, 1997, the Company adopted Statement of Financial Accounting Standards (SFAS) No. 128, "Earnings Per Share" (EPS), which requires a dual presentation of basic and diluted EPS. Basic net income (loss) per common share is computed by dividing net income (loss) by the weighted average number of common shares outstanding for the period. Diluted net income (loss) per share reflects the potential dilution that could occur if securities to issue common stock (convertible preferred stock and common stock options) were exercised or converted into common stock. Common stock equivalents are excluded from the computation in loss periods, as their effect is antidilutive.

The following table sets forth the computation of basic and diluted earnings (loss) per share (in thousands, except per share amounts):

	<u>1997</u>	<u>1998</u>	<u>1999</u>
Numerator:			
Net income (loss)	\$ 2,592	\$(13,577)	\$(25,456)
Denominator:			
Denominator for basic earnings (loss) per share— weighted average shares outstanding	31,635	32,438	32,926
Employee stock options	779	—	—
Denominator for diluted earnings (loss) per share— adjusted weighted average shares outstanding	<u>32,414</u>	<u>32,438</u>	<u>32,926</u>
Basic earnings (loss) per share	<u>\$ 0.08</u>	<u>\$ (0.42)</u>	<u>\$ (0.77)</u>
Diluted earnings (loss) per share	<u>\$ 0.08</u>	<u>\$ (0.42)</u>	<u>\$ (0.77)</u>



**SILICON VALLEY GROUP, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

Weighted average options to purchase approximately 3,700,000 shares in 1999 and 2,800,000 shares in 1998 of common stock at weighted average exercise prices of \$18.22 and \$18.59 per share, respectively, were excluded from the computation of diluted earnings per common share because their effect was antidilutive. Weighted average preferred stock convertible into approximately 461,000 common shares was excluded from the computation of diluted earnings per share in 1999 because its effect was antidilutive. In 1997, 475,000 options with a weighted average price of \$20.61 per share were outstanding but excluded from the computation of diluted earnings per share because their exercise price exceeded the average market price and therefore, the effect would be antidilutive.

*Employee Stock Plans.* The Company accounts for its stock option and employee stock purchase plans in accordance with the provisions of the Accounting Principles Board (APB) Opinion No. 25, "Accounting for Stock Issued to Employees." In accordance with SFAS No. 123, "Accounting for Stock-Based Compensation," the Company continues to apply the provisions of APB No. 25 for purposes of determining net income or loss and has adopted the pro forma disclosure requirements of SFAS No. 123 (see Note 12).

*Comprehensive Income.* In the first quarter of fiscal 1999, the Company adopted SFAS No. 130, "Reporting Comprehensive Income." SFAS No. 130 establishes standards for the reporting and display of comprehensive income. Components of comprehensive income (loss) include net income (loss), unrealized gains (losses) on investments, foreign currency translation adjustments, and pension liability changes (See Note 9). The adoption of SFAS No. 130 required additional disclosure in the consolidated statement of stockholders' equity and comprehensive income (loss), but did not impact the Company's consolidated financial position, results of operations or cash flows.

*Segment Information.* The Company adopted SFAS No. 131, "Disclosures About Segments of an Enterprise and Related Information," for the year ended September 30, 1999. SFAS No. 131 establishes annual and interim reporting standards for a Company's business segments and related disclosures about its products, services, geographic areas and major customers.

The Company primarily designs, manufactures, markets and services semiconductor wafer processing equipment used in the fabrication of integrated circuits. All operating units are aggregated into one segment because of their similarities in the nature of products and services, production processes, types of customers, and distribution method.

*Recently Issued Accounting Pronouncements.* In June 1998 and June 1999, the FASB issued SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities" and SFAS No. 137, "Accounting for Derivative Instruments and Hedging Activities—Deferral of the Effective Date of FASB Statement No. 133." These statements require companies to record all derivatives on the balance sheet as assets or liabilities measured at fair value. Gains or losses resulting from changes in the values of those derivatives would be accounted for depending on the use of the derivative and whether it qualifies for hedge accounting. SFAS No. 133 is effective for the Company's fiscal year ending September 30, 2002. Although the Company has not fully assessed the impact of the adoption, management believes that the adoption of these statements will not have a material effect on the Company's financial results.

*Reclassifications.* Certain reclassifications have been made to the prior years' Consolidated Financial Statements to conform to the fiscal 1999 presentation. Such reclassifications had no impact on the Company's financial position or results of operations.

*Fiscal Year.* The Company uses a 52-53 week fiscal year ending on the Friday closest to September 30. The accompanying financial statements have been shown as ending on September 30. Fiscal 1997 included 53 weeks, fiscal 1998 and fiscal 1999 each included 52 weeks.

**SILICON VALLEY GROUP, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**NOTE 2. ACQUISITION OF THE SEMICONDUCTOR EQUIPMENT GROUP OF WATKINS-JOHNSON.**

On July 6, 1999, the Company acquired the business of the Semiconductor Equipment Group of Watkins-Johnson Company ("SEG"), a California corporation, pursuant to a Securities Purchase Agreement dated April 30, 1999 by and between the Company and Watkins-Johnson, as amended by Amendment No. 1 to the Securities Purchase Agreement dated July 2, 1999 by and between the Company and Watkins-Johnson (as so amended, the "Purchase Agreement").

Under the terms of the Purchase Agreement, the Company acquired from Watkins-Johnson all of its limited liability company interests in Semiconductor Equipment Group, LLC and the outstanding capital stock of certain foreign subsidiaries. The acquisition was accounted for as a purchase. The Company made preliminary payments to Watkins-Johnson of approximately \$9,000,000 based upon certain values of assets and liabilities at December 31, 1998. The purchase price was adjusted to \$2,700,000 based upon the final closing Balance Sheet of July 2, 1999. The \$6,300,000 excess payment to Watkins-Johnson appears in prepaid expenses and other assets at September 30, 1999 and was refunded in October 1999. The total purchase price of \$3,750,000 included approximately \$1,050,000 in costs directly attributable to the acquisition and was allocated to the assets acquired and liabilities assumed based on their respective fair values. The excess of the net SEG assets over the total purchase price was used to proportionately reduce the value of material noncurrent assets acquired.

Also, in connection with the acquisition, \$3,450,000 was placed in escrow by Watkins-Johnson to cover potential claims by the Company. The Company has up to twelve months from the closing date to file claims for indemnification against this escrow fund. At the end of this period, the remaining funds, interest and earnings accrued revert to Watkins-Johnson.

The operating results of SEG have been included in the consolidated statements of operations since the date of acquisition. Had the acquisition taken place at the beginning of the periods presented, unaudited pro forma results of operations would have been as follows (in thousands, except per share data):

	1998	1999
Net sales	\$705,606	\$570,636
Net loss	(64,728)	(22,170)
Diluted loss per share	(2.00)	(0.67)

Pro forma financial information is presented for illustrative purposes only and does not purport to be indicative of the operating results that would have occurred had the acquisition been effected as of the periods indicated, nor is it indicative of the future operating results of the Company.

**NOTE 3. RESTRUCTURING AND RELATED CHARGES**

During the fourth quarter of fiscal 1998, the Company recorded restructuring and related charges of \$33,680,000. The charge includes costs of \$28,521,000 resulting from the termination of the Company's previously announced 200-APS photoresist processing system (the 200-APS charge) and a provision of \$5,159,000 for reductions in the Company's workforce that includes severance compensation and benefit costs for workforce reductions announced in July 1998 (\$2,696,000) and September 1998 (\$2,463,000). These workforce reductions were implemented in response to global weakness in the demand for semiconductor capital equipment as well as the decision to terminate the 200-APS product.

The 200-APS charge consisted of: the write-off of 200-APS inventory and purchase commitments, which has been classified as cost of sales; the write-off of fixed assets that were employed in the 200-APS effort; costs to fulfill obligations to customers utilizing 200-APS systems, including the cancellation of certain receivables and the support of such systems through fiscal 2000; and certain other costs related to exiting the 200-APS program.

**SILICON VALLEY GROUP, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

Changes to the restructuring accrual in fiscal 1999 are as follows (in thousands):

	<b>Severance and Benefits</b>	<b>200-APS Inventory And Purchase Commitments</b>	<b>Customer Obligations</b>	<b>Other Exit Costs</b>	<b>Total</b>
Balance at September 30, 1998	\$3,006	\$1,832	\$2,293	\$201	\$7,332
Incurred to date	(1,761)	(1,832)	(2,037)	(201)	(5,831)
Adjustments	(506)	—	—	—	(506)
Balance at September 30, 1999	<u>\$ 739</u>	<u>\$ —</u>	<u>\$ 256</u>	<u>\$ —</u>	<u>\$ 995</u>

The Company revised its estimate related to severance and benefits in fiscal 1999. Substantially all employee terminations have been effected as of September 30, 1999, although benefits will continue to be paid during fiscal 2000. Customer obligations will be concluded in fiscal 2000.

**NOTE 4. INVESTMENTS**

Investments in debt and equity securities are classified as available for sale and measured at fair value. Material unrealized gains and losses, net of tax, are recorded as a separate component of stockholders' equity until realized. At September 30, 1999 net unrealized gains on investments totaled \$435,000.

Investments at September 30 are comprised of the following:

(in thousands)	1998		1999	
	Cost	Market Value	Cost	Market Value
Available for sale:				
Institutional money market funds included in cash and cash equivalents	\$101,123	\$101,123	\$ 64,652	\$ 64,652
Municipal bonds	25,425	25,425	256	251
Municipal notes	—	—	13,833	13,806
Auction rate preferreds	3,000	3,000	—	—
Market auction preferreds	—	—	4,000	4,000
Certificates of deposit	—	—	5,030	4,985
Foreign debt securities	—	—	2,036	2,000
Corporate bonds	—	—	1,003	1,003
U.S. government agencies	—	—	17,995	17,923
Total included in short-term investments	<u>28,425</u>	<u>28,425</u>	<u>44,153</u>	<u>43,968</u>
Institutional mutual funds included in deposits and other assets	2,487	2,487	4,610	5,230
Total available for sale	<u>\$132,035</u>	<u>\$132,035</u>	<u>\$113,415</u>	<u>\$113,850</u>

All of the Company's investments at September 30, 1999 mature within one year.

**SILICON VALLEY GROUP, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**NOTE 5. BALANCE SHEET COMPONENTS**

(in thousands)	September 30	
	1998	1999
Inventories:		
Raw materials	\$103,738	\$ 83,080
Work-in-process	103,362	115,172
Finished goods	5,875	2,517
Total	\$212,975	\$200,769
Property and equipment:		
Land and improvements	\$ 11,494	\$ 19,351
Buildings and improvements	74,822	87,645
Machinery and equipment	172,584	195,944
Furniture and fixtures	36,114	41,554
Leasehold improvements	24,220	26,611
Total	319,234	371,105
Accumulated depreciation and amortization	(128,212)	(172,702)
Property and equipment, net	\$191,022	\$198,403
Intangible assets:		
Goodwill	\$ 6,019	\$ 5,705
Purchased technology	1,000	—
	7,019	5,705
Accumulated amortization	(3,283)	(2,445)
Total	\$ 3,736	\$ 3,260
Accrued liabilities:		
Compensation	\$ 28,792	\$ 23,853
Product warranty	48,943	53,746
Customer deposits and advances	31,452	23,131
Restructuring and related charges	7,332	995
Other	14,013	21,541
Total	\$130,532	\$123,266

**NOTE 6. SVG LITHOGRAPHY SYSTEMS, INC.**

Through March 17, 1997, the Company owned 94% of SVG Lithography Systems, Inc. (SVGL) and International Business Machines, Inc. (IBM) owned the remaining 6%. The minority interest reflected in the Consolidated Statement of Operations represented that share of SVGL's operating results which were attributable to IBM. On March 18, 1997, the Company purchased IBM's 6% interest in SVGL for \$3,000,000. As a result, the Company now accounts for SVGL as a wholly-owned subsidiary.

**NOTE 7. SETTLEMENT OF ROYALTY OBLIGATION**

Under the terms of a research and development agreement, SVGL owed IBM certain royalties based on future operating results. On March 18, 1997, the Company satisfied this royalty obligation to IBM in exchange for \$5,000,000 in cash, 489,296 shares of common stock valued at \$10,000,000 and \$23,000,000 in SVGL product. Of the \$38,000,000 total,

**SILICON VALLEY GROUP, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

\$32,582,000 related to products currently under development and was recognized as an expense in the second quarter of fiscal 1997, and \$5,418,000 related to existing products and was recorded as a prepayment which is being amortized to expense through fiscal year 2000.

**NOTE 8. DEBT ARRANGEMENTS**

On June 30, 1998, the Company entered into an unsecured \$150,000,000 bank revolving line of credit agreement, which expires June 30, 2001. Advances under the line bear interest at the bank's prime rate (8.25% at September 30, 1999) or 0.65% to 1.50% over LIBOR (6.13% at September 30, 1999). The agreement includes covenants regarding liquidity, profitability, leverage, coverage of certain charges and minimum net worth and prohibits the payment of cash dividends. On October 23, 1998 and May 14, 1999, certain of the covenants were amended to reflect the effects of the acquisition of SEG (See Note 2) and change quarterly profitability covenants. The Company is in compliance with the covenants as amended and there were no outstanding borrowings under this facility at September 30, 1999.

In February 1997, the Company received a \$6,500,000 loan from the Connecticut Development Authority. The loan has a ten year term, bears interest at 8.25%, and is secured by the Company's Wilton, Connecticut facility which houses certain operations of SVGL.

Tinsley Laboratories, Inc. (TLI) has two loans and one special assessment bond outstanding, which bear interest at rates between 8.5% and 12% with maturity dates through April 2007.

In 1999, the Company assumed three Yen-denominated loans in connection with the acquisition of SEG (See Note 2). Approximately \$7,700,000 (¥804.6 million), which is secured by land and buildings in Japan, is payable in monthly installments through the year 2011, bearing interest at 2.5%. Approximately \$13,000,000 (¥1,350.0 million) and \$2,000,000 (¥200.0 million) are unsecured and require a payment in 2006 and 2007, respectively, bearing interest at 3.1% and 2.2%, respectively, payable semiannually.

Interest rates on substantially all of the Company's debt reflect current market rates, therefore the carrying value of the Company's debt approximates fair value.

Long-term debt balances at September 30, consist of the following (in thousands):

	<u>1998</u>	<u>1999</u>
Connecticut Development Authority loan	\$ 5,791	\$ 5,294
TLI loans and special assessment bonds	714	512
Japanese Yen-denominated bank loans	—	<u>22,604</u>
	<u>6,505</u>	<u>28,410</u>
Less current portion	(640)	(1,620)
	<u>\$ 5,865</u>	<u>\$26,790</u>

Interest payments were \$488,000 in 1997, \$655,000 in 1998 and \$662,000 in 1999. At September 30, 1999, aggregate debt maturities were approximately: \$1,620,000 in fiscal 2000; \$1,309,000 in fiscal 2001; \$1,354,000 fiscal 2002; \$1,384,000 in fiscal 2003; \$1,443,000 in 2004; and \$21,300,000 thereafter.

**NOTE 9. EMPLOYEE BENEFIT PLANS**

The Company's profit-sharing plan provides quarterly distributions to eligible employees as determined by the Board of Directors. Profit-sharing distributions were \$1,172,000 in 1997, and \$1,623,000 in 1998. No profit-sharing distributions were made in fiscal 1999.

**SILICON VALLEY GROUP, INC.**  
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Under the Company's Cash or Deferred Profit Sharing Plan (401(k) Plan), the Company may make contributions, depending on the amount of the employee's contribution, up to a maximum of 3% of compensation. The Company's contributions were \$3,135,000 in 1997, \$3,407,000 in 1998 and \$3,432,000 in 1999.

In February 1997, the Company adopted a non-qualified deferred compensation plan that allows a select group of management or highly compensated Employees and Directors to defer a portion of their salary, bonus and other benefits. The plan is unfunded and amounts due participants represent general obligations of the Company. The Company may credit additional amounts to participants' account balances, depending on the amount of the employee's contribution, up to a maximum of 5% of an employee's annual salary and bonus. In addition, interest is credited to the participants' account balances at 120% of the average Moody's corporate bond rate. For 1999, participants' accounts will be credited at 7.18%. Company contributions and related interest become 100% vested five years after the plan year in which the contribution was made. During fiscal 1997, 1998 and 1999, the Company's expense was \$609,000, \$878,000 and \$774,000, respectively, and at September 30, 1999, the Company's liability under the deferred compensation plan was \$5,227,000.

Additionally, the Company assumed unfunded salary continuation agreements with certain key executives and employees of TLI. Under the terms of the agreement, the Company has agreed to pay certain fixed amounts over a ten year period after the employees reach the age of 65. Payments began vesting December 1990 and become fully vested only if the participants remain employed by the Company through the age of 65. The present value of these payments, calculated using a discount rate of 6% is being charged ratably to expense over the vesting period. During fiscal 1997, 1998, and 1999 the Company had related expenses of \$32,000, \$14,000, and \$21,000, respectively, and at September 30, 1999, the Company's liability under these agreements was \$532,000.

At September 30, 1999, four officers of the Company had employment agreements that provide, in the event of disability, death, or termination meeting certain criteria, for severance payments based on a multiple of their then-current compensation. At September 30, 1999, the aggregate potential payments under these agreements would have been approximately \$5,500,000.

The Company also assumed the defined benefit pension plan of TLI. The plan had previously been terminated during 1995 and the Company is currently in the process of finalizing the termination process. At September 30, 1998 and 1999, the Company had recorded a minimum pension liability of \$274,000 and \$312,000, respectively, within stockholders' equity, net of income taxes, which is based upon the excess of the estimated accumulated benefit obligation of \$1,705,000 and \$2,174,000, respectively, over the fair market value of plan assets (primarily corporate bond mutual funds) of \$1,510,000 and \$1,513,000, respectively. Upon finalization of the plan termination, the minimum pension liability will be charged to the statement of operations.

**NOTE 10. INCOME TAXES**

The provision (benefit) for income taxes consists of (in thousands):

	Years Ended September 30,		
	1997	1998	1999
Current:			
Federal	\$(1,218)	\$ 478	\$ (2,500)
State	1,433	1,252	—
Foreign	351	1,840	2,140
Total current	566	3,570	(360)
Deferred:			
Federal	(293)	(14,720)	(9,921)
State	1,241	(2,430)	(1,699)
Total Deferred	948	(17,150)	(11,620)
	\$ 1,514	\$(13,580)	\$(11,980)

**SILICON VALLEY GROUP, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

Domestic and foreign income (loss) before income taxes and minority interest is as follows (in thousands):

	<u>Years Ended September 30,</u>		
	<u>1997</u>	<u>1998</u>	<u>1999</u>
Domestic	\$ 3,898	\$(30,925)	\$(43,762)
Foreign	300	3,768	6,326
	<u>\$ 4,198</u>	<u>\$(27,157)</u>	<u>\$(37,436)</u>

The effective tax rate differs from the Federal statutory rate as follows (in thousands):

	<u>Years Ended September 30,</u>		
	<u>1997</u>	<u>1998</u>	<u>1999</u>
Statutory rate	\$ 1,469	\$ (9,505)	\$(13,103)
State taxes, net of Federal effect	200	(1,178)	(486)
Foreign taxes at differing rates	268	(51)	395
FSC commission	(464)	(1,437)	—
Tax exempt interest	(2,284)	(1,799)	(360)
Settlement of royalty obligation	1,500	—	—
Other	825	390	1,574
Total	<u>\$ 1,514</u>	<u>\$(13,580)</u>	<u>\$(11,980)</u>

The items giving rise to deferred taxes were as follows (in thousands):

	<u>September 30,</u>	
	<u>1998</u>	<u>1999</u>
Deferred tax assets:		
Reserves not recognized for tax purposes	\$28,907	\$37,256
Net operating loss carryforwards	3,130	7,530
Accelerated depreciation	273	(497)
Total deferred tax assets	32,310	44,289
Valuation allowance	(9,297)	(9,297)
Total	<u>\$23,013</u>	<u>\$34,992</u>

The components giving rise to the net deferred tax asset described above have been included in the accompanying consolidated balance sheet as follows:

	<u>September 30,</u>	
	<u>1998</u>	<u>1999</u>
Current assets	\$22,740	\$35,489
Deposits and other assets	273	—
Deferred and other liabilities	—	(497)

At September 30, 1999, the Company had approximately \$11,300,000 and \$4,200,000 of federal and state loss carryforwards available to offset future income. These losses begin to expire in year 2004. Additionally, approximately \$7,900,000 of federal loss carryforwards were available to offset future federal taxable income generated by SVGL, through the year 2007, subject to certain limitations. The valuation allowance relates to the net deferred tax assets of SVGL.

In 1997 and 1998, the Company made income tax payments of \$2,882,000, and \$16,878,000 respectively. In 1999, income tax refunds were \$13,207,000.

**SILICON VALLEY GROUP, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**NOTE 11. STOCKHOLDERS' EQUITY**

*Convertible Preferred Stock.* On May 5, 1999 Intel Corporation (Intel) made a \$15,000,000 equity investment in the Company in the form of a purchase of 15,000 shares of newly issued non-voting Series 1 Convertible Preferred Stock (Series 1 Preferred). The Series 1 Preferred investment is convertible into 1,111,111 shares of the Company's common stock subject to adjustments for events of dilution in certain circumstances such as stock splits or dividends. Intel has the option to convert, at any time, its Series 1 Preferred into shares of the Company's common stock.

In connection with the Series 1 Preferred investment, Intel and the Company entered into an agreement for the development of 157-nanometer lithography technology. This agreement obligates the Company, among other things, to develop and sell to Intel a predetermined number of initial development tools. Intel has agreed to provide advance payments for the development and manufacture of these machines based on predetermined milestones. Under certain conditions, the Company is obligated to dedicate a certain amount of 157-nanometer unit production output to Intel. The Company is required to use the proceeds from the Series 1 Preferred investment and funds received under this development agreement for the development of technology for use on 157-nanometer lithography equipment.

*Preferred Shares Purchase Rights.* In September 1996, the Company's Board of Directors adopted a plan for the distribution of one Preferred Shares Purchase Right (the Rights) to the holder of each outstanding share of the Company's common stock. The rights expire in September 2006 and are not exercisable until a person or group announces the acquisition of 15% or more of the Company's outstanding common stock, or the commencement of a tender or exchange offer for 15% or more of the Company's common stock. Each Right entitles its holder to purchase 1/1000 of one new share of the Company's Series A Participating Preferred Stock at an exercise price of \$125, subject to certain antidilution adjustments. Additionally, a holder would be entitled, under certain circumstances, to purchase shares of common stock of the Company or, in other cases, of the acquiring company, having a market value of twice the exercise price of the Right. Under certain conditions, the Company may redeem the Rights for a price of \$0.01 per Right or exchange each Right not held by the acquirer for one share of the Company's common stock.

**NOTE 12. STOCK OPTION AND PURCHASE PLANS**

Under the Company's stock option plans, the Board of Directors may, at its discretion, grant incentive or nonqualified stock options to employees and directors, and options are automatically granted annually to directors who are not employees of the Company. Options may be granted with a period not to exceed ten years from the date of grant, at prices at least equal to the fair market value of common stock at the grant date, and vest and become exercisable generally over a period of up to five years.

Activity under the plans is as follows (shares in thousands):

	<u>Shares Under Option</u>	<u>Weighted Average Exercise Price</u>
Balances, October 1, 1996	2,127	\$13.02
Granted	823	25.03
Exercised	(372)	10.34
Canceled	(117)	17.94
Balances, September 30, 1997	2,461	16.97
Granted	1,121	21.64
Exercised	(158)	5.47
Canceled	(218)	20.24
Balances, September 30, 1998	3,206	18.93
Granted	1,502	13.35
Exercised	(215)	6.73
Canceled	(173)	19.34
Balances, September 30, 1999	<u>4,320</u>	<u>\$17.60</u>



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**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

The following table summarizes information concerning options outstanding and exercisable as of September 30, 1999:

Range of Exercise Prices	Number Outstanding	Options Outstanding		Options Exercisable	
		Weighted Average Contractual Life (in years)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
\$ 4.66 – \$15.00	1,965,754	6.53	\$12.88	644,823	\$11.61
16.13	717,212	3.79	16.13	524,515	16.13
16.63 – 20.63	653,527	7.97	20.25	215,825	19.90
\$21.25 – \$32.69	983,051	6.30	26.36	418,665	26.26
Total	<u>4,319,544</u>	<u>6.24</u>	<u>\$17.60</u>	<u>1,803,828</u>	<u>\$17.31</u>

At September 30, 1999, approximately 5,567,120 options to purchase common stock were authorized, with 1,247,576 options available for future grant.

Under the Company's Employee Stock Purchase Plan, 2,950,000 shares of common stock were reserved for issuance of which 1,915,354 had been issued at September 30, 1999. The plan permits eligible employees to purchase, through payroll deductions, common stock at 85% of the lower of the fair market value of the common stock on the first or last day of the offering period. The plan has offering periods of twelve months, with a new twelve-month period beginning each April 1 and October 1.

*Pro Forma Net Income and Earnings Per Share.* The Company has elected to continue following APB No. 25, in accounting for its employee stock options. Under APB No. 25, because the exercise price of the Company's employee options equals the market price of the underlying stock on the date of grant, no compensation expense is recognized in the Company's financial statements.

Pro forma information regarding net income and earnings per share is required by SFAS No. 123. This information is required to be determined as if the Company had accounted for its employee stock options (including shares under the Employee Stock Purchase Plan) granted subsequent to September 30, 1995 under the fair value method of that statement.

The fair value of options was estimated at the date of grant using the Black-Scholes option pricing model. The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options which have no vesting restrictions and which are fully transferable. In addition, the Black-Scholes model requires the input of highly subjective assumptions, including the expected stock price volatility. Because the Company's employee stock option and stock purchase plans have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing models do not necessarily provide a reliable single measure of the fair value of the Company's stock-based awards to employees. The fair value of the stock option plan and the stock purchase plan was estimated assuming no expected dividends and the following weighted average assumptions:

	1997	1998	1999
Stock option plan:			
Expected stock price volatility	56%	64%	69%
Risk free interest rate	6.4%	6.0%	4.9%
Expected life of options after vesting:			
Officers and directors	2 years	7.2 months	1 month
All others	9 months	7.3 months	1.7 months
Stock purchase plan:			
Expected stock price volatility	56%	60%	67%
Risk free interest rate	5.8%	6.0%	5.3%
Expected life of options	1 year	1 year	1 year

The Company's calculations are based on a multiple option valuation approach and recognition of forfeitures as they occur. The weighted average fair value of options granted during the fiscal 1997, 1998 and 1999 was approximately \$12.57,

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\$9.85 and \$4.18 per share, respectively. The weighted average fair value of purchase rights granted in fiscal 1997, 1998 and 1999 was approximately \$8.76, \$7.68 and \$5.94 per share, respectively.

For purposes of pro forma disclosures required by SFAS No. 123, the estimated fair value of the options is amortized to expense over the options' vesting period. The Company's pro forma information follows (in thousands except for earnings per share information):

	<u>1997</u>	<u>1998</u>	<u>1999</u>
Proforma net loss	\$(3,738)	\$(21,116)	\$(34,006)
Proforma loss per share—basic	(0.12)	(0.65)	(1.03)
Proforma loss per share—diluted	(0.12)	(0.65)	(1.03)

For pro forma purposes in accordance with SFAS No. 123, the repricing of employee stock options during 1996 is treated as a modification of the stock-based award, with the original options being repurchased and new options granted. Any additional compensation arising from the modification is recognized over the remaining vesting period of the new grant. SFAS 123 is effective for stock-based awards granted by the Company commencing October 1, 1995. All stock-based awards granted before October 1, 1995, have not been valued and no pro forma compensation expense has been recognized. However, any option granted before October 1, 1995 that was repriced in 1996 is treated as a new grant within 1996 and valued accordingly. In addition, because compensation expense is recognized over the vesting period of the option, the initial impact on pro forma income may not be representative of pro forma compensation expense in future years.

**NOTE 13. COMMITMENTS**

Future minimum lease payments for operating leases for the years ended September 30 (primarily facilities) are as follows (in thousands):

2000	\$ 7,149
2001	5,948
2002	5,604
2003	5,201
2004	24,250
Thereafter through 2010	<u>1,196</u>
Total	<u>\$49,348</u>

Rent expense was \$7,009,000, \$7,006,000 and \$7,360,000 in 1997, 1998 and 1999, respectively.

During 1999, the Company entered into two synthetic lease agreements for facilities in San Jose and for the Scotts Valley facility (See Note 2). Both leases are for a five-year term. Monthly rent payments are variable at 0.61% to 2.0% over LIBOR. For the Scotts Valley facility, the Company entered into an interest rate swap contract to fix the interest rate and, therefore, the lease payment. Under the terms of the leases, the Company, at its option, can acquire the properties at their original cost or arrange for properties to be acquired. If the Company does not purchase the properties by the end of the lease terms, the Company will be contingently liable to the lessors for residual value guarantees of approximately \$8,400,000 and \$12,125,000 respectively (included in future minimum lease payments above). In addition, under the terms of the leases, the Company must maintain compliance with certain financial covenants. As of September 30, 1999, the Company was in compliance with all of its covenants. Management believes that the contingent liability related to the residual value guarantees does not currently have a material adverse effect on the Company's financial position or results of operations.

**NOTE 14. RESEARCH AND DEVELOPMENT AGREEMENTS**

The Company, primarily through SVGL, has obtained research and development funding from outside parties. Under the research and development agreements, the Company receives payments based on meeting specified product development milestones and retains ownership of the developed technology and products. The Company does not anticipate that such

**SILICON VALLEY GROUP, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

funding will cover the entire cost of the development efforts to which it pertains. Therefore, it is recorded as a reduction of research, development, and related engineering, in amounts approximating the percentage of costs incurred to date to the total estimated costs of such development efforts.

The Company incurred costs of \$40,227,000 in 1997, \$12,842,000 in 1998 and \$9,231,000 in 1999 relating to such product development and recognized \$7,968,000, \$11,997,000 and \$2,902,000, respectively, in related funding.

During fiscal 1996, the Company entered into agreements with certain customers (the Participants) whereby each agreed to assist in funding the Company's development of an advanced technology 193-nanometer Micrascan system. In exchange for such funding the Participants receive the right to purchase one such system and in addition, receive a right of first refusal (ratable among such participants) to all such machines manufactured during the first two years following the initial system shipments. For each initial system ordered, each Participant agreed to fund \$5,000,000 in such development costs. The agreements call for each Participant to pay \$1,000,000 of initial development funding and four subsequent payments of \$1,000,000 upon the completion of certain development milestones. The participants may withdraw from the development program without penalty but payments made against completed development milestones are not refundable and all preferential rights to future equipment are forfeited. As of September 30, 1999, the Company had received \$20,000,000 in funding from six Participants, all of which had been recognized and offset against research and development expenditures. During fiscal 1999 all but one of the Participants withdrew from the development program and the Company shipped a 193-nanometer Micrascan system to the remaining Participant. The Company's obligations under these agreements are complete, and no additional funding is expected from the Participants.

**NOTE 15. GEOGRAPHIC SEGMENTS**

The Company's products are manufactured in the United States and are sold worldwide. The Company designs, manufactures, markets and services semiconductor wafer processing equipment used in the fabrication of integrated circuits. All operating units are aggregated into one segment because of their similarities in the nature of products and services, production processes, types of customers, and distribution method. The Company markets internationally through both its foreign-based sales and service operations and through outside distributors and sales representatives.

One customer accounted for 36% of sales in 1997, 40% of sales in 1998, and 56% of sales in 1999; a second customer accounted for 22% of sales in 1997, 17% of sales in 1998 and 7% of sales in 1999; and a third customer accounted for 6% of sales in 1997, 13% of sales in 1998 and 6% of sales in 1999.

The following table summarizes total net sales and long-lived assets attributed to significant countries as of and for the years ended September 30 (in thousands):

	<u>1997</u>	<u>1998</u>	<u>1999</u>
Net sales:			
United States	\$442,314	\$393,375	\$322,095
France	53,600	44,240	13,059
Ireland	3,180	86,465	20,641
Israel	65	11,183	51,481
Other	115,067	73,362	66,414
Total net sales	<u>\$614,226</u>	<u>\$608,625</u>	<u>\$473,690</u>
Long-lived assets:			
United States	\$157,289	\$195,272	\$185,187
Japan	536	489	18,341
Other	2,548	2,307	1,477
Total long-lived assets	<u>\$160,373</u>	<u>\$198,068</u>	<u>\$205,005</u>

**SILICON VALLEY GROUP, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

Net sales are attributed to countries based upon the shipment destinations and service locations of systems. Long-lived assets consist of net property and equipment, deposits and other assets, and net intangible assets, excluding long-term investments and long-term deferred tax assets. Export sales were 23% of net sales in 1997, 29% of net sales in 1998, and 20% of net sales in 1999.

**NOTE 16. ACQUISITION OF TINSLEY LABORATORIES, INC.**

On November 26, 1997, the Company acquired Tinsley Laboratories, Inc. (TLI) in a stock for stock transaction whereby approximately 1,091,000 shares of the Company's common stock were exchanged for all outstanding shares of TLI common stock. TLI designs, manufactures and sells precision optical components, assemblies and systems to customers in a variety of industries and research endeavors. The transaction was accounted for as a pooling of interests for financial reporting purposes. All prior periods have been restated to include TLI financial results.

**NOTE 17. LEGAL MATTERS**

On or about August 12, 1998, Fullman International Inc. and Fullman Company LLC (collectively, Fullman) initiated a lawsuit in the United States District Court for the District of Oregon alleging claims for fraudulent conveyance, constructive trust and declaratory relief in connection with a settlement the Company had previously entered into resolving its claims against a Thailand purchaser of the Company's equipment. In its complaint against the Company, Fullman, allegedly another creditor of the Thailand purchaser, alleges damages of approximately \$11,500,000 plus interest. The Company has successfully moved to transfer the case to the United States District Court for the Northern District of California. The trial is tentatively scheduled for July 2000.

While the outcome of such litigation is uncertain, the Company believes it has meritorious defenses to the claims and intends to conduct a vigorous defense. However, an unfavorable outcome in this matter could have a material adverse effect on the Company's financial condition.

In addition to the above, the Company, from time to time, is party to various legal actions arising out of the normal course of business. The resolution of such matters, and the Fullman litigation, are not expected to have a material adverse effect on the Company's financial position or operating results.

**NOTE 18. SUMMARIZED QUARTERLY FINANCIAL INFORMATION (UNAUDITED)**

(in thousands, except per share amounts)	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>
1999				
Net sales	\$ 85,487	\$ 61,496	\$136,894	\$189,813
Gross profit	24,030	14,170	47,860	75,311
Income (loss) before income taxes	(10,353)	(26,450)	(3,037)	2,404
Net income (loss)	(7,032)	(17,994)	(2,065)	1,635
Net income (loss) per share—basic	(0.21)	(0.55)	(0.06)	.05
Net income (loss) per share—diluted	(0.21)	(0.55)	(0.06)	.05
1998				
Net sales	\$188,707	\$195,872	\$116,385	\$107,661
Gross profit	74,388	77,514	38,088	10,239
Income (loss) before income taxes	17,860	14,059	(11,357)	(47,719)
Net income (loss)	12,145	9,560	(6,817)	(28,465)
Net income (loss) per share—basic	0.38	0.30	(0.21)	(0.87)
Net income (loss) per share—diluted	0.37	0.29	(0.21)	(0.87)

**Item 8A. *The Company's Fiscal Year***

The Company observes a 52-53 week fiscal year ending on the Friday closest to September 30. Under this practice, the Company's last three fiscal years ended October 3, 1997, October 2, 1998 and October 1, 1999. For convenience, this Report and the Company's Consolidated Financial Statements refer to all such fiscal years as ending at September 30. Fiscal 1998 and fiscal 1999 each included 52 weeks. Fiscal 1997 included 53 weeks.

**Item 9. *Changes in and Disagreements with Accountants.***

Not applicable.

**PART III**

Certain information required by Part III is omitted from this Report in that the Registrant will file its definitive Proxy Statement for the Annual Meeting of Stockholders to be held on February 23, 2000, pursuant to Regulation 14A of the Securities Exchange Act of 1934 (the "Proxy Statement"), not later than 120 days after the end of the fiscal year covered by this Report, and certain information included in the Proxy Statement is incorporated herein by reference.

**Item 10. *Directors and Executive Officers of the Registrant.***

(a) *Executive Officers.* See the section entitled "Executive Officers of the Registrant" in Part I, Item 1 of this Report.

(b) *Directors.* The information required by this Item is incorporated by reference to the section entitled "Election of Directors" in the Proxy Statement.

**Item 11. *Executive Compensation.***

The information required by this Item is incorporated by reference to the section entitled "Executive Compensation" in the Proxy Statement.

**Item 12. *Security Ownership of Certain Beneficial Owners and Management.***

The information required by this Item is incorporated by reference to the section entitled "Stock Ownership of Certain Beneficial Owners and Management" in the Proxy Statement.

**Item 13. *Certain Relationships and Related Transactions.***

The information required by this Item is incorporated by reference to the section entitled "Certain Transactions" in the Proxy Statement.

**PART IV**

**Item 14. *Exhibits, Financial Statement Schedule and Reports on Form 8-K.***

(a) 1. **Financial Statements.**

The financial statements (including the notes thereto) listed in the Index to Consolidated Financial Statements and Financial Statement Schedule (set forth in Item 8 of Part II of this Form 10-K) are filed within this Annual Report on Form 10-K.

2. **Supplemental Schedule.**

The financial statement schedule listed in the Index to Consolidated Financial Statements and Financial Statements Schedule (set forth in Item 8 of Part II of this Form 10-K) is filed within this Annual Report on Form 10-K.

### 3. Exhibits.

<u>Exhibit No.</u>	<u>Exhibit</u>
10.50	Amendment to Employment Agreement between the Registrant and Papken S. Der Torossian dated June 7, 1999.*
10.51	Amendment to Employment Agreement between the Registrant and William A. Hightower dated June 7, 1999.*
10.52	Amendment to Employment Agreement between the Registrant and Russell G. Weinstock dated June 7, 1999.*
10.53	Amendment to Employment Agreement between the Registrant and Boris Lipkin dated June 7, 1999.*
10.54	Participation Agreement by and among SELCO Service Corporation, the Registrant and KeyBank National Association, as agent for the participants named therein, dated June 30, 1999.
10.55	Purchase Agreement between SELCO Service Corporation and the Registrant, dated June 30, 1999.
10.56	Lease Agreement, Deed of Trust with Assignment of Rents, Security Agreement and Fixture Filing between SELCO Service Corporation and the Registrant, dated June 30, 1999.
10.57	Loan Agreement dated as of February 9, 1996 (English Translation) between Watkins-Johnson International Japan K.K. and The Bank of Yokoyama Ltd., including Loan Guaranty Agreement by the Registrant effective July 6, 1999.
10.58	Loan Agreement dated as of June 12, 1996 (English Translation) between Watkins-Johnson International Japan K.K. and The Japan Development Bank, including Loan Guaranty Agreement by the Registrant effective July 6, 1999.
10.59	Loan and Relocation Agreement between the Registrant and Jeffrey Kowalski dated August 31, 1999.*
21.1	Registrant's wholly-owned subsidiaries are (i) SVG Lithography Systems, Inc., a Delaware corporation (SVGL), (ii) Tinsley Laboratories, Inc., a California corporation ("TLI"), (iii) Silicon Valley Group, Japan Ltd., a Japanese corporation, (iv) SVG International Service, a California corporation ("SVG International"), (v) Silicon Valley Group FSC Incorporated, a Barbados corporation, (vi) SVG Israel, Inc., a Delaware corporation, (vii) SVG Thailand, Inc., a Delaware corporation, (viii) Silicon Valley Group Korea, Inc., (SVG Korea) a Korean corporation, (ix) SVG Taiwan, Inc., a Delaware corporation, (x) Silicon Valley Group, Thermal Systems LLC, a Delaware company and (xi) Watkins-Johnson International Taiwan, a Taiwan corporation. SVG Lithography Japan Co., Ltd., a Japanese corporation, Silicon Valley Group B.V., a Netherlands corporation, SVG France S.A.R.L., a French corporation, and SVG Lithography Systems FSC, Inc., a Barbados corporation are wholly-owned by SVGL. Century Precision Industries, Inc., a California corporation and Tinsley International FSC, a Barbados corporation are wholly-owned by TLI. SVG Europe Limited, a United Kingdom corporation (SVG Europe), Silicon Valley Group Deutschland GmbH, a German corporation, SVG Systems (Asia) Pte. Ltd (SVG Singapore), a Singapore corporation and Thermco Systems (Far East) Limited, a Hong Kong corporation are wholly-owned by SVG International. UK Systems Limited, an English corporation, and Watkins-Johnson Europe Limited, an English corporation are wholly-owned by SVG Europe. Watkins-Johnson International Singapore Pte. Ltd., is wholly owned by SVG Singapore. Watkins-Johnson International Korea, Ltd., is wholly owned by SVG Korea.
23.1	Consent of Deloitte & Touche LLP, independent auditors.
24.1	Power of Attorney. [See page 54]
27	Financial Data Schedule.

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\* Management contract or compensatory plans or arrangements

(b) **Reports on Form 8-K.**

The Company filed reports on Form 8-K on July 16, 1999 and an amended Form 8-KA on September 17, 1999 in connection with the acquisition of the Semiconductor Equipment Group of Watkins-Johnson Company. Included in the Form 8-K are financial statements for the Company and for the Semiconductor Equipment Group of Watkins-Johnson Company.

(c) **Exhibits.** See (a) above.

(d) **Financial Statement Schedules.** See (a) above.

**SILICON VALLEY GROUP**

**SCHEDULE II  
VALUATION AND QUALIFYING ACCOUNTS  
(In Thousands)**

<u>Description</u>	<u>Balance at Beginning of Period</u>	<u>Charged to Costs and Expenses</u>	<u>Deductions<sup>(1)</sup></u>	<u>Balance at End Of Period</u>
<b>Year Ended 9/30/97:</b>				
Allowance for Doubtful Accounts	\$ 6,078	\$ 7,725	\$ (7,009)	\$ 6,794
Product Warranty Reserves	42,899	42,320	(41,685)	43,534
<b>Year Ended 9/30/98:</b>				
Allowance for Doubtful Accounts	6,794	3,273	(1,835)	8,232
Product Warranty Reserves	43,534	64,138	(58,729)	48,943
<b>Year Ended 9/30/99:</b>				
Allowance for Doubtful Accounts	8,232	(2,579) <sup>(3)</sup>	(615)	5,038
Product Warranty Reserves	48,943	46,371 <sup>(2)</sup>	(41,568)	53,746

(1) Write-offs of uncollectible accounts and costs incurred for warranty repairs.

(2) Includes \$7,076,000 in product warranty reserves acquired from Watkins-Johnson Company's Semiconductor Equipment Group (See Note 2 of the Consolidated Financial Statements included in Item 8).

(3) Includes approximately \$2,800,000 of recoveries of previously reserved amounts.

## 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.

December 22, 1999

SILICON VALLEY GROUP, INC.

By:           /s/          PAPKEN S. DER TOROSSIAN            
Papken S. Der Torossian  
*Chairman of the Board and*  
*Chief Executive Officer*

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Papken S. Der Torossian and Russell G. Weinstock, and each of them, as his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments to this report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

<u>Signatures</u>	<u>Title</u>	<u>Date</u>
<u>          /s/          PAPKEN S. DER TOROSSIAN          </u> Papken S. Der Torossian	Chairman of the Board, Chief Executive Officer And Director (Principal Executive Officer)	December 22, 1999
<u>          /s/          WILLIAM A. HIGHTOWER          </u> William A. Hightower	President Chief Operating Officer and Director	December 22, 1999
<u>          /s/          RUSSELL G. WEINSTOCK          </u> Russell G. Weinstock	Vice President, Finance And Chief Financial Officer (Principal Financial And Accounting Officer)	December 22, 1999
<u>          /s/          MICHAEL J. ATTARDO          </u> Michael J. Attardo	Director	December 22, 1999
<u>          /s/          WILLIAM L. MARTIN          </u> William L. Martin	Director	December 22, 1999
<u>          /s/          NAM P. SUH          </u> Nam P. Suh	Director	December 22, 1999
_____ Kenneth M. Thompson	Director	
<u>          /s/          LAWRENCE TOMLINSON          </u> Lawrence Tomlinson	Director	December 22, 1999



**EXHIBIT 23.1**

**INDEPENDENT AUDITORS' CONSENT**

We consent to the incorporation by reference in the Registration Statements Nos. 33-31298, 33-85020, 333-39499 and 333-80079 of Silicon Valley Group, Inc. on Forms S-8 of our report dated October 25, 1999 appearing in this Annual Report on Form 10-K of Silicon Valley Group, Inc. for the year ended September 30, 1999.

/s/ DELOITTE & TOUCHE LLP  
Deloitte & Touche LLP

San Jose, California  
December 20, 1999



# Corporate Directory

## Directors

### **Papken S. Der Torossian**<sup>3</sup>

Chairman of the Board and  
Chief Executive Officer

### **William A. Hightower**

President and Chief Operating Officer

### **Michael J. Attardo**

Retired General Manager  
Microelectronics Division, IBM

### **William L. Martin**<sup>1,2,3</sup>

Retired Chief Executive Officer  
Plantronics, Inc.

### **Nam P. Suh**<sup>3</sup>

Cross Professor, Head of the Department  
of Mechanical Engineering and  
Director of the Manufacturing Institute,  
Massachusetts Institute of Technology

### **Kenneth M. Thompson**<sup>1</sup>

Retired Vice President  
Technology, Manufacturing and Engineering,  
Intel Corp.

### **Lawrence Tomlinson**<sup>1,2</sup>

Vice President and Treasurer  
Hewlett-Packard

<sup>1</sup> Audit Committee Member

<sup>2</sup> Compensation Committee Member

<sup>3</sup> Technical Advisory Committee Member

## Officers

### **Papken S. Der Torossian**

Chairman of the Board and  
Chief Executive Officer

### **William A. Hightower**

President and Chief Operating Officer

### **Russell G. Weinstock**

Vice President, Finance and  
Chief Financial Officer

### **Steven L. Jensen**

Vice President  
Worldwide Sales and Marketing

### **Jeffrey M. Kowalski**

Vice President  
President, Thermal Systems

### **Boris Lipkin**

Vice President  
Corporate

### **Larry W. Sonsini**

Secretary

## Stockholder Information

### **Independent Accountants**

Deloitte & Touche LLP  
San Jose, California

### **Stock Transfer Agent**

ChaseMellon Shareholder Services  
San Francisco, California

### **General Counsel**

Wilson Sonsini Goodrich & Rosati  
Palo Alto, California

### **Shareholder Relations**

Silicon Valley Group, Inc.  
101 Metro Drive, Suite 400  
San Jose, California 95110

Further information on the Company's activities, additional copies of this report or other financial materials may be obtained on the Internet at [www.svg.com](http://www.svg.com) or by calling the Stockholder Information Service at 800-836-3992.

### **Annual Meeting of Stockholders**

The Company's annual meeting will be held at 3:00 p.m. on Wednesday, February 23, 2000, at the Company's offices:

2240 Ringwood Avenue  
San Jose, California 95131

SVG and Micrascan are registered trademarks and Micrascan Step-and-Scan, ProCell, Advanced Guidance System and APNext are trademarks of Silicon Valley Group, Inc.



**SILICON VALLEY GROUP, INC.**

101 Metro Drive, Suite 400, San Jose, California 95110