






# Clarity

MKS Annual Report 2000 -

**clarity**

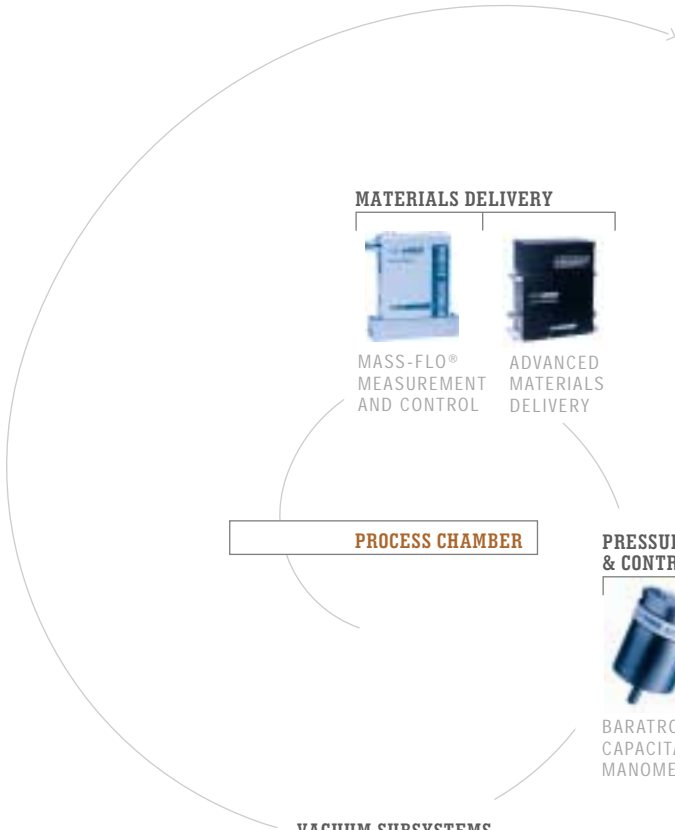


**Clear Vision:** Help our customers become more productive, through intelligent control and monitoring of manufacturing processes for semiconductors, data storage, medical devices, and other leading-edge technologies.

**Clear Strategy:** Surround sophisticated manufacturing processes with products that work better by working together, integrating function and knowledge.

**Clear Results:** Record-setting financials. Carefully selected acquisitions. A robust platform for growth, enabling key advances in diverse high-tech fields like wireless and optical communication, pharmaceuticals, and medicine.

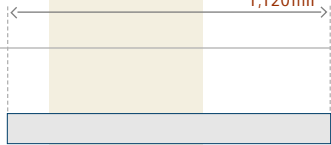




**MKS CORE PRODUCTS**

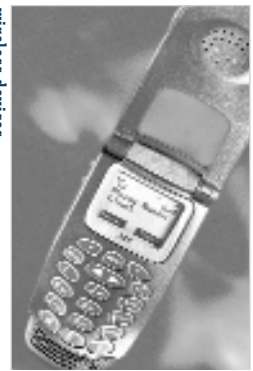
SERVED AVAILABLE MARKETS

1,120mil



AN EXAMPLE OF MKS-ENABLED PRODUCTS

Wireless devices



**DIGITAL CONTROL**



D.I.P.™  
DIGITAL  
CONTROL  
NETWORK  
PRODUCTS

**PROCESS MONITORS**



SPECTRA™  
PROCESS  
MONITORS



PICO™  
LEAK  
DETECTORS

**PROCESS CHAMBER**

**YEAR 2000 ACQUISITIONS**

**SERVED  
AVAILABLE  
MARKETS**

250mil

**AN EXAMPLE OF  
MKS-ENABLED PRODUCTS**

flat panel displays



**REACTIVE GAS GENERATORS**



ASTeX®  
ASTRON®  
AND OZONE  
GENERATORS

**POWER**



ASTeX®  
RF, DC AND  
MICROWAVE  
POWER  
GENERATORS

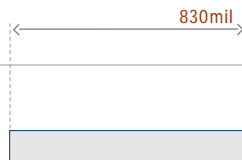


**PROCESS CHAMBER**



**ASTeX® PRODUCTS**

**SERVED  
AVAILABLE  
MARKETS**



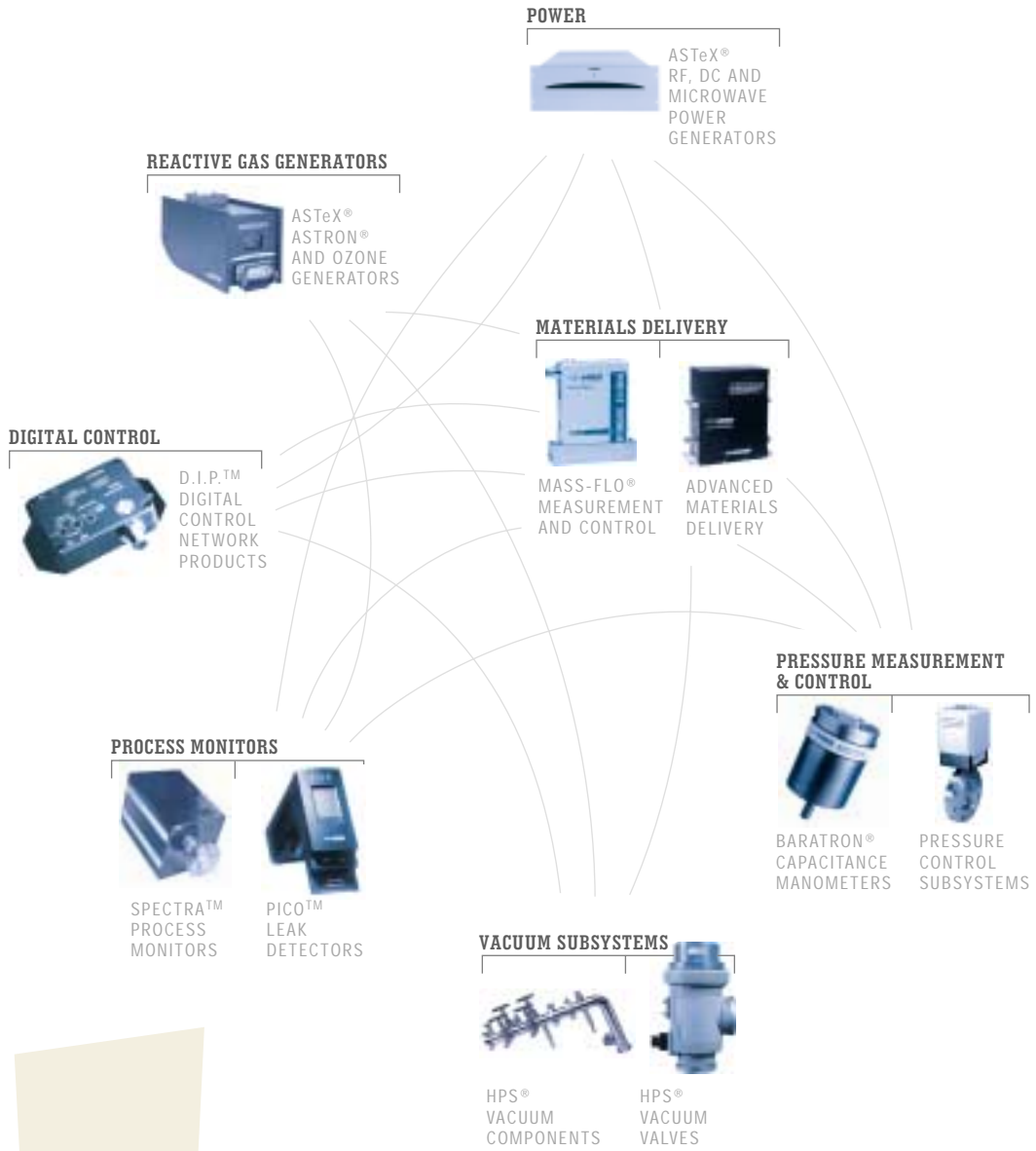
**AN EXAMPLE OF  
MKS-ENABLED PRODUCTS**



3

air 2000 mks





**A BROAD PRODUCT PORTFOLIO ALLOWS MKS TO TAILOR COMPLETE INTEGRATED SUBSYSTEMS FOR OUR CUSTOMERS, GIVING THEM HIGHER PERFORMANCE AT LOWER COST AND REDUCED SIZE.**

**SERVED AVAILABLE MARKETS**

2,200mil



**AN EXAMPLE OF MKS INTEGRATED SUBSYSTEM**

efficient management subsystem for TEOS



NOTE: SERVED AVAILABLE MARKETS SOURCE DATA: VLSI RESEARCH, ASEM, SEMI AND COMPANY ESTIMATES FOR YEAR 2000





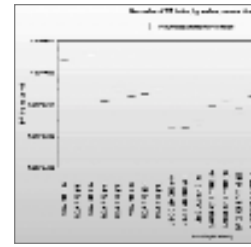
AN INTEGRATED DIGITAL PRESSURE CONTROL SUBSYSTEM COMBINES MKS' PRESSURE MEASUREMENT, PRESSURE CONTROL AND DIGITAL CONTROL NETWORK TECHNOLOGIES.

## TO OUR SHAREHOLDERS

**The New MKS.** After a very successful Year 2000, we are pleased to report that MKS Instruments is a significantly larger, more profitable and financially stronger company. Today, MKS offers a comprehensive suite of best-in-class products that control critical parameters of semiconductor, thin-film and other advanced materials manufacturing processes. We bring together the broad range of products necessary to control, analyze, isolate and energize the physical and chemical reactions required to create sophisticated electronic devices. We also provide integrated products that work better by working together. This "integrated process solution" approach is a fundamental strategic thrust of MKS that adds even higher value to our customers.

The "new" MKS was born from the success of our current growth strategy, realized by acquiring companies that broaden our product and technology portfolio, and by continuing to expand our integrated product offerings through internal development. Specifically, in 2000, we acquired four companies with complementary manufacturing technology and introduced new products that furthered our "surround the process" goal. Virtually all of today's advanced semiconductor devices are made using our products. By offering additional fully integrated process control solutions, which lower total customer cost and improve productivity, we increase our value to customers and continue to build a strong platform for growth.

In January 2001, we acquired Applied Science and Technology, Inc., commonly known as ASTeX, which represents our largest acquisition to date. The combination of the two companies brings together approximately 2,000 employees and clearly provides us with the size and scale to be a high-value, high service, one-stop supplier for our more than 4,000 customers around the world.

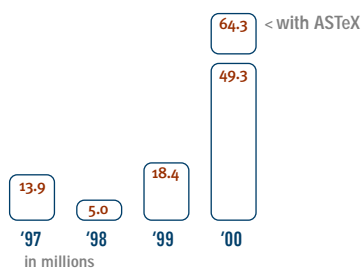


MKS SPECTRA™ PRODUCTS  
PR INDEX™ SOFTWARE MODULE  
DETECTS CONTAMINATION IN  
PROCESS CHAMBERS AND  
GUARDS AGAINST PROCESS-  
RELATED DEFECTS AND  
MANUFACTURING DOWNTIME.

**Delivering Strong Financial Results.** Our tremendous growth in 2000 reflects MKS' ability to leverage our core business strengths, namely our extensive product offerings, our technological leadership, our strong relationships with leading Original Equipment Manufacturers (OEMs) and end users, and our ability to quickly and efficiently bring innovative new products to market. We reported record net sales of \$327 million in 2000, up 75% compared to net sales of \$187 million in 1999. Our profitability also increased markedly during the year as our 2000 net income increased by 151% to \$46.2 million, or \$1.76 per diluted share, compared to pro forma net income of \$18.4 million, or \$0.77 per diluted share, for year 1999. Because of the intangible amortization resulting from our ongoing acquisition program, we believe that cash earnings are the most meaningful measure of our profitability. Our cash earnings grew 168% to \$49.3 million, or \$1.87 per share, for 2000, compared to pro forma cash earnings of \$18.4 million, or \$0.77 per share, for 1999.

We also increased our shareholders' equity — up 67% to \$199 million at December 31, 2000 — primarily attributable to the strong increase in earnings. As of December 31, 2000, on a pro forma basis, MKS and ASTeX cash and short-term investments totaled a combined \$132.3 million and total debt outstanding was \$31 million.

CASH EARNINGS





INITIALLY DEVELOPED AT COMPACT INSTRUMENT, THE MKS PICO™ IS THE WORLD'S SMALLEST PORTABLE, MASS SPECTROMETER-BASED LEAK DETECTOR, WEIGHING LESS THAN 12 POUNDS.



PRECISION ULTRAHIGH VACUUM SUBASSEMBLY FOR AN ANALYTICAL INSTRUMENT MADE BY TELVAC ENGINEERING.



THE DNPOCKET™ FROM D.I.P.™ PRODUCTS PROVIDES A DIGITAL INTERFACE BETWEEN A PALM™ HANDHELD PDA AND A DEVICENET™ DIGITAL NETWORK FOR PROCESS DIAGNOSTICS, ELIMINATING THE NEED FOR A BULKY LAPTOP.

**Integrating New Product Groups on a Strong Platform for Growth.** Our recent acquisitions have further strengthened our comprehensive process control product portfolio. With superior technology, a global infrastructure, world-class manufacturing practices, and an experienced management team, MKS is well positioned to integrate these new product groups into our strong platform for growth.

When we bring another company into the MKS organization, we must be assured that the fundamentals are in place. First, the acquisition must be in line with our growth strategy, and second, it must strengthen our current product offerings by either expanding opportunities within our current markets or expanding our business into new markets.

These acquisitions have enabled MKS to add new product groups, each with distinctive, yet complementary, product offerings. Not only do these groups bring exciting new products to MKS, but they also create new platforms through which we will continue our innovative approach to the development of new products.

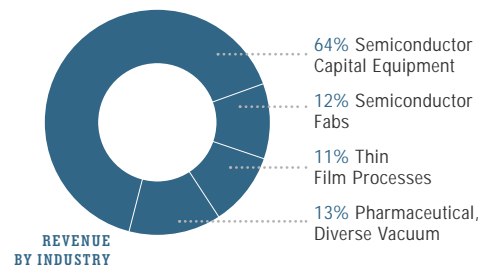
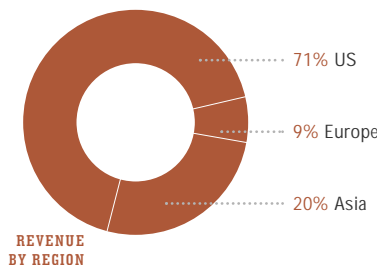
*March 2000 – Compact Instrument Technology.* MKS acquired Compact Instrument Technology, which is now the MKS Advanced Technology Group. Prior to the acquisition, Compact had developed a small, portable gas analysis platform that is being launched as the MKS PICO™ Leak Detector. This product detects leaks from pressurized gas lines in the semiconductor, automotive, HVAC and chemical processing industries, and is significantly smaller and approximately five times lighter than traditional leak detectors. In this way, we are capitalizing on miniaturization trends, adding further to MKS' industry-leading product portfolio, and increasing MKS' served available market. The sophisticated engineering expertise that was added to MKS through this acquisition is enabling us to develop new value-added products, as well as to integrate MKS technologies across present product groups.

*May 2000 – Telvac Engineering.* U.K.-based Telvac Engineering manufactures vacuum subsystems, and offers design and manufacturing outsourcing to OEMs. Furthermore, Telvac strengthens MKS' manufacturing capabilities for European markets. As we continue to provide increasingly complex subsystems, Telvac contributes experience and expertise in complex subsystem outsourcing. These attributes are expected to help us increase our share of the European analytical instrument and thin-film semiconductor processing markets. The rapidly growing demand in Europe for optical devices for data transmission and advanced analytical instruments for biotechnology requires many manufacturers to outsource much of their vacuum subsystem design and manufacturing. This trend represents a major opportunity for the MKS Telvac Engineering product group.

*July 2000 – Spectra International.* MKS acquired Spectra International, which manufactures process analysis instruments that, when added to advanced process tools, can detect process chamber contaminant problems. These contaminants can induce process-related defects and decrease yield. The new Spectra Products group of MKS is focused on identifying and filling customer needs to improve uptime and yield, as it continually refines and develops unique products to suit specific applications. By leveraging the global infrastructure of MKS, Spectra has enhanced its reputation as a supplier of state-of-the-art, value-added gas analysis instruments using both mass spectra and optical spectra analysis technologies.

*September 2000 – D.I.P., Inc.* D.I.P. designs and manufactures digital control network products used in semiconductor manufacturing equipment, commercial vehicles, oil and gas refining and chemical process equipment. Specifically, these products enable digital communication between process tools or other devices, using industry-standard communications protocols such as DeviceNet™. Now known as D.I.P.™ Products, this group makes "gateways" that link serial digital interfaces to multiple devices in industrial automation and control applications. This type of digital interface development is not only enhancing our ability to satisfy the needs of a number of large customers, but it is also complementing the digital control capabilities of other MKS products, including pressure and flow measurement and control instruments, vacuum measurement instruments and process monitors. Digital interfacing and control of these products lowers cost, provides key process data collection and data reduction tools, and reduces the response time needed to make process changes.

**DIVERSIFIED REVENUE MIX**





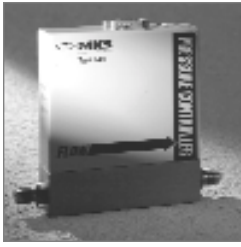
THE ASTeX® SEMOZON™ IS AN OZONE DELIVERY SUBSYSTEM FOR ADVANCED CHEMICAL VAPOR DEPOSITION PROCESSES. THIS INTEGRATED SUBSYSTEM COMBINES REACTIVE GAS GENERATION, PRESSURE MEASUREMENT AND CONTROL, AND FLOW CONTROL TECHNOLOGIES.

**The ASTeX Merger: Broadening our Product and Technology Portfolio.** By combining the strengths of MKS, a leading supplier of gas process control products, with ASTeX, a leading supplier of gas plasma and reactive gas solutions, we have made significant progress towards our strategic objective of completely surrounding advanced materials processes with MKS control instruments and subsystems.

The acquisition brought two major technologies to MKS – gas plasma and reactive gas generation and process power delivery, from DC to RF and microwave. ASTeX's products based on these two technologies are well established in the semiconductor market and are expected to strengthen our sales to a number of major customers. As there is virtually no overlap between ASTeX's products and MKS' existing products, ASTeX's sales are 100% additive. At the same time, ASTeX brings several new critical core competencies to MKS, including plasma physics; switching power supplies; complex subsystem testing; and RF, DC and microwave technology. In keeping with a key element of our growth strategy, ASTeX also sells its products into non-semiconductor markets. For example, sales of power supplies to the medical market for magnetic resonance imaging (MRI) systems and for antiseptic sterilization of medical implements provide diversification and balance against swings in the semiconductor business cycle.

In summary, all of these acquisitions significantly expand our product offerings, add to our technology base and strengthen our global operations. They join a technologically advanced product portfolio that includes MKS' Baratron® pressure measurement and control products, HPS® vacuum products, Mass-Flo® materials delivery products and a growing range of Integrated Component Subsystems™. MKS' broad product line monitors and controls four critical process parameters – pressure, gas flow, gas composition and energy – used in advanced manufacturing processes. Clearly, this combination provides our broadened customer base with a complete suite of best-in-class products to control processes and maximize the productivity of their vacuum and gas-based manufacturing equipment.

We welcome each of these product groups to the MKS family and look forward to continuing to leverage our strengths and technical expertise to further build upon our position as the supplier of the broadest range of process solutions with the worldwide capabilities to support them.



AN MKS INTEGRATED GAS CONTROL SUBSYSTEM FOR SEMICONDUCTOR WAFER BACKSIDE COOLING INCLUDES PRESSURE MEASUREMENT, PRESSURE CONTROL AND FLOW MEASUREMENT TECHNOLOGIES IN A SINGLE, COMPACT PACKAGE.



MKS EFFLUENT MANAGEMENT SUBSYSTEMS™ INTEGRATE COMPONENTS FROM MANY MKS PRODUCT GROUPS TO MAXIMIZE PRODUCTIVITY BY MINIMIZING CONTAMINATION IN SEMICONDUCTOR DEVICE MANUFACTURING.

**Capitalizing on our Core Business Strengths.** MKS' strategy is to participate in growing markets, to continually increase market share in the markets we serve, to add to our broad-based product and technology portfolio and to continue to develop the complex integrated products that our customers need. In turn, this strategy enables us to enjoy several fundamental business strengths:

**Most Extensive Product Offering** – Pressure measurement and control products, materials delivery and analysis products and vacuum products make up our principal product areas that are designed to surround the manufacturing process. In addition, our product portfolio includes digital network, reactive gas generation and power delivery products. This broad array of instruments, components and subsystems enables us to sell integrated solutions to our customers. These integrated products provide more capability at lower total cost and smaller size. This capability is a distinct competitive advantage as there is no other supplier able to offer the breadth of MKS' product offerings and technologies.

**Technological Innovation and Leadership** - In 2000, we introduced a number of new products, enabling MKS to better service the needs of our customers. Among the most recent introductions is a contaminant by-product trap for advanced metal etch applications which cost-effectively minimizes a major source of particles and equipment downtime. This product is part of a suite of process solution products aimed at increasing productivity in wafer fabs. We also expanded the offering of the Spectra™ Process Eye™ software modules, which help wafer fabs avoid costly downtime on their thin film deposition equipment by continuously monitoring for gas contamination in wafer processing chambers. In 2000, MKS launched the Baratron® Etch Manometer™, another application-specific product designed to provide etch engineers with more stable pressure measurement for the latest generation of aggressive etch processes. For advanced chemical vapor deposition (CVD) processes, we introduced a pressure control valve with a particularly wide dynamic range that allows our customers to replace two valves with a single valve for both high and low pressure processes. In addition, the combination of our Baratron pressure technology and our materials delivery expertise allowed MKS to introduce a Vapor-on-Demand Module (VoDM™) for precise delivery of water vapor in wafer stripping and cleaning applications. This integrated subsystem provides the customer with greater functionality and control within a significantly smaller package.

We continued to protect our intellectual property in 2000 with 5 newly issued patents, and 17 patent filings.

**Strong Customer Relationships** – MKS' commitment to develop new products that improve yield, throughput and uptime for our customers has enabled us to create strong long-term relationships with OEMs and end users. We currently serve over 4,000 customers, including most semiconductor OEMs and wafer fabs around the world. We are the preferred supplier to many of the semiconductor and thin-film equipment suppliers, worldwide. As a trusted partner with our OEM and end-user customers, we participate in the development of leading edge technologies, well in advance of their use in high volume device fabrication. Technology purchases continue to be made during periods of industry over-capacity, which helps us to increase market share as the industry recovers and gives us some buffer to the cyclicality of the industry.

**Quick to Market** - Our products are sold primarily through our direct sales force, supplemented by sales representatives and agents. At the end of 2000, our broad global infrastructure featured 13 strategically located manufacturing facilities and 34 customer support centers throughout the world, and enabled us to rapidly identify and respond to our customers' changing needs and quickly bring new products to market. MKS' manufacturing operation is respected throughout the industry as a leading practitioner of lean manufacturing techniques. In fact, *Industry Week* magazine recently recognized MKS as a top-tier U.S. manufacturer by selecting us as one of the top 25 finalists in its 2000 "Best Plants in America" competition.

**BREADTH OF PRODUCT-DEPTH OF SUPPORT**

	PRESSURE MEASUREMENT AND CONTROL	FLOW MEASUREMENT AND CONTROL	PROCESS GAS ANALYSIS	DIGITAL NETWORK	VACUUM PRODUCTS	REACTIVE GAS GENERATION	POWER GENERATION	SUBSYSTEM INTEGRATION
<b>MKS</b>	●	●	●	●	●	●	●	●
<b>COMPETITOR A</b>						○	○	
<b>COMPETITOR B</b>		○						
<b>COMPETITOR C</b>		○						
<b>COMPETITOR D</b>			○		○			
<b>COMPETITOR E</b>							○	

NOTE: COMPANY ESTIMATES OF MARKET PARTICIPANTS WITH SHARE >5%

**Effectively Meeting Customer Requirements.** Our broad product portfolio, global infrastructure and preferred supplier status with many key customers have put us in a strong position to gain market share in the years ahead. Many customers are looking to consolidate their supplier bases and favor those companies, like MKS, that provide breadth of products and depth of support. Moreover, by working closely with OEMs at the design concept and design-in stages, MKS is able to anticipate and quickly respond to constantly evolving customer needs.

At the same time, OEMs and end users need suppliers that can help them maximize their productivity. Our ability to do just that is reflected in our motto "Technology for Productivity," demonstrating our mission to provide the technology that enables our customers to produce the best-in-class products demanded by the advanced materials processing industries.

Of the markets we served in 2000, the strongest percentage gains came from the semiconductor industry and from thin-film technology markets. Specifically, during 2000, we experienced 102% growth in sales to the semiconductor market and an 89% increase in sales to thin film customers, driven by growth in markets such as opto-electronics, data storage and flat panel displays. This growth is particularly significant as it greatly broadens our market potential.

#### MKS GLOBAL SUPPORT



France  
Germany  
Ireland  
Israel

Italy  
Japan  
Korea  
Netherlands

Singapore  
Taiwan  
United Kingdom  
United States





JOHN R. BERTUCCI



PETER R. YOUNGER

**Going Forward: Our Near-Term Outlook.** Although the outlook for the semiconductor capital equipment market is uncertain for 2001, we believe that we are in a better position than ever to maintain and strengthen our market position, putting us in excellent shape to pursue our growth strategy over the long term. With our recent acquisitions, we have enhanced our technology base and we have significantly expanded our served markets.

Our sound balance sheet provides us with the financial leverage to continue to invest in research and development initiatives, while pursuing additional complementary acquisitions in line with our growth strategy.

On behalf of our senior management team and the MKS Board of Directors, we want to take this opportunity to thank our shareholders, employees, customers and suppliers for their contributions to creating "the new MKS." We have entered 2001 on a very strong footing, competitively positioned for today's marketplace and with a clear vision of our growth potential in the years ahead.

Sincerely,

**John R. Bertucci**  
Chairman of the Board and Chief Executive Officer

**Peter R. Younger**  
President and Chief Operating Officer





### Selected Consolidated Financial Data

(in thousands, except per share data)

Year Ended December 31	2000	1999	1998	1997	1996
<b>Statement of Income Data</b>					
Net sales	\$326,955	\$187,083	\$139,763	\$188,080	\$170,862
Gross profit	150,375	79,855	55,979	80,474	68,854
Income from operations	72,179	27,611	9,135	23,963	16,068
Net income	\$ 46,234	\$ 24,037	\$ 7,186	\$ 20,290	\$ 12,503
Historical net income per share - Diluted	\$ 1.76	\$ 1.00	\$ 0.38	\$ 1.10	\$ 0.69
<b>Pro Forma Statement of Income Data<sup>1</sup></b>					
Pro forma net income		\$ 18,412	\$ 5,044	\$ 13,806	\$ 8,248
Pro forma net income per share - Diluted		\$ 0.77	\$ 0.27	\$ 0.76	\$ 0.46
<b>Balance Sheet Data</b>					
Cash and cash equivalents	\$ 44,675	\$ 35,714	\$ 11,188	\$ 2,511	\$ 3,815
Working capital	111,768	87,088	31,493	30,321	22,404
Total assets	266,383	174,605	96,232	106,536	95,000
Short-term obligations	17,705	20,828	12,819	13,852	16,124
Long-term obligations, less current portion	4,176	5,662	13,786	15,624	18,899
Stockholders' equity	198,935	119,169	54,826	52,848	45,498
Quarter Ended	Mar 31	Jun 30	Sep 30	Dec 31	
<b>2000</b>					
<b>Statement of Income Data</b>					
Net sales	\$ 65,556	\$ 77,701	\$ 87,636	\$ 96,062	
Gross profit	30,043	36,002	40,586	43,744	
Income from operations	14,616	17,872	19,420	20,271	
Net income	9,331	11,286	12,436	13,181	
Historical net income per share - Diluted	\$ 0.36	\$ 0.43	\$ 0.47	\$ 0.50	
<b>1999</b>					
<b>Statement of Income Data</b>					
Net sales	\$ 37,910	\$ 44,209	\$ 50,621	\$ 54,343	
Gross profit	15,353	18,659	21,745	24,098	
Income from operations	3,541	5,907	7,999	10,164	
Net income	3,129	7,576	6,037	7,295	
Historical net income per share - Diluted	\$ 0.16	\$ 0.30	\$ 0.24	\$ 0.28	
<b>Pro Forma Statement of Income Data<sup>1</sup></b>					
Pro forma net income	\$ 2,150	\$ 3,806	\$ 5,677	\$ 6,779	
Pro forma net income per share - Diluted	\$ 0.11	\$ 0.15	\$ 0.22	\$ 0.26	

<sup>1</sup> Data is computed on the same basis as Note 2 of Notes to Consolidated Financial Statements. The historical net income per share data does not include provisions for federal income taxes because prior to its initial public offering in 1999, MKS was treated as an S corporation for federal income tax purposes. The Pro Forma Statement of Income Data for 1996-1999 presents net income and net income per share data as if MKS had been subject to federal income taxes as a C corporation during the periods presented.

## Management's Discussion and Analysis of Financial Condition and Results of Operations

When used in this Annual Report, including this Management's Discussion and Analysis, the words "believes," "anticipates," "plans," "expects" and similar expressions are intended to identify forward-looking statements. These forward-looking statements reflect management's current opinions and are subject to certain risks and uncertainties that could cause actual results to differ materially from those stated or implied. MKS Instruments, Inc. ("MKS" or the "Company") assumes no obligation to update this information. Risks and uncertainties include, but are not limited to, those discussed in the section entitled "Management's Discussion and Analysis – Trends, Risks and Uncertainties."

*Overview.* MKS was founded in 1961. MKS develops, manufactures and supplies instruments and components used to measure, control and analyze gases in semiconductor manufacturing and similar industrial manufacturing processes. During 2000, MKS estimates that approximately 76% of its net sales were to semiconductor capital equipment manufacturers and semiconductor device manufacturers. MKS expects that sales to such customers will continue to account for a substantial majority of its sales. MKS's customers include semiconductor capital equipment manufacturers, semiconductor device manufacturers, industrial manufacturing companies and university, government and industrial research laboratories. In 2000, 1999 and 1998, sales to MKS's top five customers accounted for approximately 42%, 33% and 24%, respectively, of MKS's net sales. During 2000, Applied Materials, Inc. accounted for approximately 25% of MKS's net sales.

A significant portion of MKS's sales are to operations in international markets. International sales by MKS's foreign operations, located in Japan, Korea, Europe, Singapore and Taiwan, were 29.4% and 31.3% of net sales for 2000 and 1999, respectively. Sales by MKS's Japan subsidiary comprised 15.3% and 16.4% of net sales in 2000 and 1999, respectively. MKS does not classify export sales made directly by MKS as international sales. Such export sales have generally been less than 10% of net sales. MKS currently uses, and plans to continue to use, forward exchange contracts and local currency purchased options to reduce currency exposure arising from foreign currency denominated intercompany sales of inventory. Gains and losses on derivative financial instruments that qualify for hedge accounting are classified in cost of sales. Gains and losses on derivative financial instruments that do not qualify for hedge accounting are marked-to-market and recognized immediately in other income. See Note 3 of Notes to Consolidated Financial Statements.

MKS was treated as an S corporation for federal income tax purposes prior to its initial public offering in 1999. MKS's S corporation status terminated upon the closing of the offering, at which time MKS became subject to federal, and certain state, income taxation as a C corporation. The pro forma net income reflects a pro forma effective tax rate of 38.0% in 1998 and 37.1% in 1999 to reflect federal and state income taxes which would have been payable had MKS been taxed as a C corporation for each period.

On April 5, 1999 MKS closed the initial public offering of its Common Stock. In connection with this offering and the exercise of an over-allotment option by the underwriters, the Company sold 6,375,000 shares of Common Stock at a price of \$14.00 per share. The net proceeds to the Company were approximately \$82,000,000. Offering costs were approximately \$1,000,000.

On April 5, 1999 MKS distributed \$40,000,000, which was the estimated amount of the Company's undistributed S Corporation earnings as of the day prior to the closing of the offering.

MKS completed several acquisitions in fiscal 2000, all of which have been accounted for under the purchase method of accounting. Accordingly, the results of operations for each acquired company have been included in the MKS consolidated results of operations from the date of purchase. On March 10, 2000 MKS acquired Compact Instrument Technology, LLC, or Compact Instrument, a start-up

company with proprietary technology in process monitoring for semiconductor manufacturing and other manufacturing processes. The purchase price was \$8,700,000 and consisted of \$8,400,000 in MKS common stock and \$300,000 in assumed net liabilities. On May 5, 2000 MKS acquired Telvac Engineering, Ltd., or Telvac, a UK-based, privately held manufacturer of vacuum subsystems. The purchase price was \$1,600,000, and consisted of \$750,000 in cash, \$750,000 in debt and \$100,000 in other acquisition expenses. On July 21, 2000 MKS acquired Spectra International, LLC, or Spectra, a privately held company with products and technology in process monitoring. The purchase price consisted of \$9,700,000 cash; 183,293 shares of MKS common stock valued at \$6,500,000; fully vested options to purchase 83,675 shares of MKS common stock valued at \$2,400,000; and \$400,000 in acquisition costs. On September 6, 2000 MKS acquired D.I.P., Inc., or D.I.P., a privately held company with products and technology in digital process control. The purchase price was \$6,900,000 cash; 231,392 shares of MKS common stock valued at \$6,800,000; and \$300,000 in acquisition costs. See Note 12 of "Notes to Consolidated Financial Statements."

*Results of Operations.* The following table sets forth for the periods indicated the percentage of total net sales of certain line items included in MKS's consolidated statement of income data:

Year Ended December 31	2000	1999	1998
Net sales	100.0%	100.0%	100.0%
Cost of sales	54.0	57.3	59.9
Gross profit	46.0	42.7	40.1
Research and development	7.0	7.1	8.7
Selling, general and administrative	15.6	20.8	24.9
Amortization of goodwill and acquired intangible assets	1.2	---	---
Purchase of in-process technology	0.1	---	---
Income from operations	22.1	14.8	6.5
Interest income (expense), net	0.6	0.4	(0.8)
Other income (expense), net	(0.1)	0.4	0.1
Income before income taxes	22.6	15.6	5.8
Provision for income taxes	8.5	2.8	0.7
Net income	14.1%	12.8%	5.1%

**Pro forma data:**

Historical income before income taxes	15.6%	5.8%
Pro forma provision for income taxes	5.8	2.2
Pro forma net income	9.8%	3.6%

**Year Ended 2000 Compared to 1999**

*Net Sales.* Net sales increased 74.8% to \$327.0 million for the year ended December 31, 2000 from \$187.1 million in the same period of 1999. International net sales were approximately \$96.1 million for the year ended December 31, 2000 or 29.4% of net sales and \$58.5 million for the year ended December 31, 1999 or 31.3% of net sales. The increase in net sales was due to increased worldwide sales volume of MKS's existing products which resulted primarily from increased sales to the Company's semiconductor capital equipment manufacturer and semiconductor device manufacturer customers, and an increase of approximately \$11.1 million from the companies acquired during 2000.

*Gross Profit.* Gross profit as a percentage of net sales increased to 46.0% for the year ended December 31, 2000 from 42.7% for the same period of 1999. The increase was primarily due to fuller utilization of existing manufacturing capacity as a result of increased net sales and other manufacturing efficiencies.

*Research and Development.* Research and development expense increased 73.9% to \$23.0 million or 7.0% of net sales for the year ended December 31, 2000 from \$13.2 million or 7.1% of net sales for the same period of 1999 due to increased compensation of \$4.2 million, increased spending for development materials related to projects in process of \$3.7 million and increased spending on other costs related to development work.

*Selling, General and Administrative.* Selling, general and administrative expenses increased 30.4% to \$50.9 million or 15.6% of net sales for the year ended December 31, 2000 from \$39.0 million or 20.8% of net sales for the same period of 1999 due primarily to increased compensation expense of \$6.1 million, earnout payments of \$1.2 million related to the acquisition of Spectra International, LLC, increased professional fees and other selling, general and administrative expenses.

*Amortization of Goodwill and Acquired Intangibles Assets.* Amortization of goodwill and acquired intangible assets of \$4.0 million for the year ended December 31, 2000, represents the amortization of goodwill and other intangibles resulting from the acquisitions completed by MKS during the year.

*Purchase of In-Process Technology.* In July, 2000 the Company acquired Spectra International, LLC in a transaction accounted for as a purchase. The purchase price was allocated to the assets acquired, including intangible assets, based on their estimated fair values. The intangible assets include approximately \$0.3 million for acquired in-process technology for projects that did not have future alternative uses. This allocation represents the estimated fair value based on risk-adjusted cash flows related to the in-process technology projects. At the date of the acquisition, the development of these projects had not yet reached technological feasibility, and the technology in progress had no alternative future uses. Accordingly, these costs were expensed in the three months ended September 30, 2000.

*Interest Income (Expense), Net.* During the years ended December 31, 2000 and 1999, the Company generated net interest income of \$2.0 million and \$0.8 million, respectively, primarily from the invested net proceeds of our initial public offering, offset by interest expense on outstanding debt.

*Other Income (Expense), Net.* Other expense of \$0.2 million in the year ended December 31, 2000 represents expenses related to the preparation of the registration statement for the Company's follow-on public stock offering. The Company decided not to proceed with the follow-on offering, and has converted the registration statement to a shelf registration statement. Other income of \$0.8 million in the year ended December 31, 1999 represents a distribution from one of MKS's mutual insurance carriers upon the initial public offering of the insurance carrier and gains recorded from foreign exchange contracts which did not qualify for hedge accounting.

*Provision for Income Taxes.* Prior to the closing of its initial public offering in April, 1999 MKS was treated as an S corporation for tax purposes. As an S corporation, MKS was not subject to federal, and certain state, income taxes. Upon the closing of its initial public offering on April 5, 1999, MKS's status as an S corporation was terminated and it became subject to taxes as a C corporation. The pro forma provision for income taxes in 1999 reflects the estimated tax expense MKS would have incurred had it been subject to federal and state income taxes as a C corporation. The pro forma provision differs from the federal statutory rate due primarily to the effects of state and foreign taxes and certain tax credits. The 2000 provision for income taxes of 37.5% differs from the pro forma provision for 1999 due to higher nondeductible expenses, primarily goodwill.

### Year Ended 1999 Compared to 1998

*Net Sales.* Net sales increased 33.9% to \$187.1 million for 1999 from \$139.8 million for 1998. International net sales were approximately \$58.5 million in 1999 or 31.3% of net sales and \$45.3 million in 1998 or 32.4% of net sales. The increase in net sales was primarily due to increased sales volume of MKS's existing products in the United States and in Asia which resulted primarily from increased sales to the Company's semiconductor capital equipment manufacturer and semiconductor device manufacturer customers.

*Gross Profit.* Gross profit as a percentage of net sales increased to 42.7% for 1999 from 40.1% in 1998. The increase was primarily due to fuller utilization of existing manufacturing capacity as a result of increased net sales.

*Research and Development.* Research and development expenses increased 9.0% to \$13.2 million or 7.1% of net sales for 1999 from \$12.1 million or 8.7% of net sales for 1998. The increase was due to increased spending for development materials.

*Selling, General and Administrative.* Selling, general and administrative expenses increased 12.4% to \$39.0 million or 20.8% of net sales from \$34.7 million or 24.9% of net sales for 1998. The increase was due primarily to increased incentive compensation expense of \$3.3 million, professional fees, and other selling expenses.

*Interest Income (Expense), Net.* During 1999, the Company generated net interest income of \$0.8 million primarily from the invested net proceeds of the initial public offering, offset by interest expense on outstanding debt. Net interest expense of \$1.2 million for 1998 represents interest on outstanding loans, offset by interest income earned on cash and cash equivalents and short-term investments.

*Other Income (Expense), Net.* Other income of \$0.8 million for 1999 includes a distribution of \$0.7 million from one of MKS's mutual insurance carriers upon the initial public offering of the insurance carrier, and also includes gains recorded from foreign exchange contracts which did not qualify for hedge accounting. Other income of \$0.2 million in 1998 primarily represents foreign exchange translation gains on intercompany payables of \$1.0 million offset by \$0.7 million for costs associated with MKS's planned initial public offering in early 1998.

Effective April 1, 1999 MKS adopted Statement of Financial Accounting Standards (SFAS) No. 133, "Accounting for Derivative Instruments and Hedging Activities." SFAS No. 133 requires that all derivative instruments be recorded on the balance sheet at their fair value. Changes in the fair value of derivatives are recorded each period in current earnings or other comprehensive income, depending on whether a derivative is designated as part of a hedge transaction and, if it is, the type of hedge transaction. The adoption of SFAS No. 133 did not have a material impact on MKS's financial position or results of operations. The derivative instruments currently held by MKS which have been designated as hedges, including forward exchange contracts, local currency purchased options, and an interest rate swap, qualify for hedge accounting under SFAS No. 133, and changes in their fair value will be recorded as a component of other comprehensive income until the hedged transaction occurs.

*Pro Forma Provision for Income Taxes.* Prior to the closing of its initial public offering in April, 1999 MKS was treated as an S corporation for tax purposes. As an S corporation, MKS was not subject to federal, and certain state, income taxes. Upon the closing of its initial public offering on April 5,

1999, MKS's status as an S corporation was terminated and it became subject to taxes as a C corporation. The pro forma provision for income taxes reflects the estimated tax expense MKS would have incurred had it been subject to federal and state income taxes as a C corporation. The pro forma provision differs from the federal statutory rate due primarily to the effects of state and foreign taxes and certain tax credits. The pro forma provision for 1999 reflects a pro forma tax rate of 37.1%. This rate differs from the pro forma tax rate of 38% for 1998 due to increased tax credits and lower non-deductible expenses in 1999.

#### Liquidity and Capital Resources

MKS has financed its operations and capital requirements through a combination of cash provided by operations, long-term real estate financing, capital lease financing and short-term lines of credit. On April 5, 1999 the Company completed the initial public offering of its Common Stock. In connection with this offering and the exercise of an over-allotment option by the underwriters, the Company sold 6,375,000 shares of Common Stock at a price of \$14.00 per share. The net proceeds to the Company were approximately \$82,000,000 and were received in the second quarter of 1999. Underwriting discounts and commissions were approximately \$6,200,000, and other offering costs were approximately \$1,000,000. On April 5, 1999 MKS distributed \$40,000,000, which was the estimated amount of its undistributed S Corporation earnings as of the day prior to the closing of the offering.

Operations provided cash of \$34.0 million for 2000 primarily from generating net income. This cash flow was impacted by depreciation and changes in the levels of accounts payable, accrued expenses, accounts receivable and a non-cash deferred tax credit. Investing activities utilized cash of \$19.6 million for 2000 primarily from the purchases of Telvac, Spectra and D.I.P, and the purchases of property and equipment, offset by proceeds from selling short-term investments. Financing activities utilized cash of \$5.0 million primarily for payments on long-term debt.

Working capital was \$111.8 million as of December 31, 2000, an increase of \$24.7 million from December 31, 1999. MKS has a combined \$40.0 million line of credit with two banks, expiring April 30, 2001, all of which is available.

Prior to its initial public offering, the Company entered into a Tax Indemnification and S Corporation Distribution Agreement with its then existing stockholders (the "Pre-IPO stockholders"). The agreement includes provisions for the payment, with interest, by the Pre-IPO stockholders or MKS, as the case may be, for the difference between the \$40,000,000 distributed as an estimate of the amount of the accumulated adjustments account as of April 4, 1999, which is the date the Company's S Corporation status was terminated, and the actual amount of the accumulated adjustments account on that day. The actual amount of the accumulated adjustments account was \$41,416,619. Accordingly, the Company made an additional distribution of \$1,416,619, plus interest of \$177,524, to the Pre-IPO stockholders during the three months ended September 30, 2000. The amount of the additional distribution payable had been estimated to be \$3,350,000. This estimated amount was charged directly to retained earnings during 1999 and had no impact on net income or earnings per share. The difference between the actual additional distribution and the estimated additional distribution was credited directly to retained earnings during the three months ended September 30, 2000 and had no impact on net income or earnings per share. The amount of the accumulated adjustments account can be affected by future income tax audits of MKS. If any audit increases or decreases the accumulated adjustments account, MKS or the Pre-IPO stockholders, as the case may be, will also be required to make a payment, with interest, of such difference to the other party. No shareholders,



other than the Pre-IPO stockholders, are parties to the Tax Indemnification and S Corporation Distribution Agreement.

MKS believes that its working capital, together with the cash anticipated to be generated from operations and funds available from existing credit facilities, will be sufficient to satisfy its estimated working capital and planned capital expenditure requirements through at least the next 24 months.

#### Recently Issued Accounting Pronouncements

In December 1999, the Securities and Exchange Commission issued Staff Accounting Bulletin No 101 ("SAB 101"), "Revenue Recognition." SAB 101 summarizes the staff's view in applying generally accepted accounting principles to revenue recognition. The Company adopted SAB 101 in fiscal year 2000. The adoption did not have a material effect on its financial statements.

*Recent Developments.* On January 26, 2001 the Company closed its acquisition of Applied Science and Technology, Inc., or ASTeX, a Wilmington, Massachusetts based company that designs, develops, and manufactures precision reactive gas solutions. Under the terms of the agreement, each outstanding share of ASTeX common stock was exchanged for 0.7669 newly issued shares of common stock of MKS, resulting in the issuance of approximately 11.2 million shares of common stock of MKS, representing 30% of MKS's then outstanding shares. This acquisition will be accounted for under the pooling of interests method of accounting.

#### Trends, Risks and Uncertainties

##### Factors That May Affect Future Results

*MKS' business depends substantially on capital spending in the semiconductor industry which is characterized by periodic fluctuations that may cause a reduction in demand for MKS' products.* MKS estimates that approximately 66% of its sales during 1999 and 76% of its sales in 2000 were to semiconductor capital equipment manufacturers and semiconductor device manufacturers, and it expects that sales to such customers will continue to account for a substantial majority of its sales. MKS' business depends upon the capital expenditures of semiconductor device manufacturers, which in turn depend upon the demand for semiconductors. Periodic reductions in demand for the products manufactured by semiconductor capital equipment manufacturers and semiconductor device manufacturers may adversely affect MKS' business, financial condition and results of operations. Historically, the semiconductor market has been highly cyclical and has experienced periods of overcapacity, resulting in significantly reduced demand for capital equipment. For example, in 1996 and 1998, the semiconductor capital equipment industry experienced significant declines, which caused a number of MKS customers to reduce their orders. The downturn in capital spending by semiconductor manufacturers also reduced ASTeX's sales during portions of 1998 and 1999, resulting in significant losses. More recently, in the first quarter of 2001, MKS has announced that there has been a reduction in demand from OEM customers, and that it expects lower gross margins due to reduced absorption of manufacturing overhead at the lower revenue levels and a higher proportion of lower margin products. In addition, many semiconductor manufacturers have operations and customers in Asia, a region which in recent years has experienced serious economic problems including currency devaluations, debt defaults, lack of liquidity and recessions. MKS cannot be certain that semiconductor downturns will not recur. A decline in the level of orders as a result of any future downturn or slowdown in the semiconductor capital equipment industry could have a material adverse effect on MKS' business, financial condition and results of operations.

MKS' quarterly operating results have varied, and are likely to continue to vary significantly. This may result in volatility in the market price for MKS' shares. A substantial portion of MKS' shipments occur shortly after an order is received and therefore MKS operates with a low level of backlog. As a result, a decrease in demand for MKS' products from one or more customers could occur with limited advance notice and could have a material adverse effect on MKS' results of operations in any particular period.

A significant percentage of MKS' expenses are relatively fixed and based in part on expectations of future net sales. The inability to adjust spending quickly enough to compensate for any shortfall would magnify the adverse impact of a shortfall in net sales on MKS' results of operations. Factors that could cause fluctuations in MKS' net sales include:

- the timing of the receipt of orders from major customers;
- shipment delays;
- disruption in sources of supply;
- seasonal variations of capital spending by customers;
- production capacity constraints; and
- specific features requested by customers.

For example, MKS was in the process of increasing its production capacity when the semiconductor capital equipment market began to experience a significant downturn in 1996. This downturn had a material adverse effect on MKS' operating results in the second half of 1996 and the first half of 1997. After an increase in business in the latter half of 1997, the market experienced another downturn in 1998, which had a material adverse effect on MKS' 1998 and first quarter 1999 operating results. As a result of the factors discussed above, it is likely that MKS will in the future experience quarterly or annual fluctuations and that, in one or more future quarters, its operating results will fall below the expectations of public market analysts or investors. In any such event, the price of MKS' common stock could decline significantly.

*The loss of net sales to any one of MKS' major customers would likely have a material adverse effect on MKS.* MKS' five largest customers accounted for approximately 42% of its net sales in 2000, 33% of its net sales in 1999 and 24% of its net sales in 1998. The loss of a major customer or any reduction in orders by these customers, including reductions due to market or competitive conditions, would likely have a material adverse effect on MKS' business, financial condition and results of operations. During 2000 and 1999, one customer, Applied Materials, accounted for approximately 25% and 22%, respectively, of MKS' net sales. In addition, Applied Materials accounted for approximately 50% of the revenues of ASTeX in its fiscal year 2000. MKS' purchase contract with Applied Materials expires in April 2001. While MKS and Applied Materials are currently negotiating a new agreement, there can be no assurance that negotiations will be successful. None of MKS' significant customers, including Applied Materials, has entered into an agreement requiring it to purchase any minimum quantity of MKS' products. The demand for MKS' products from its semiconductor capital equipment customers depends in part on orders received by them from their semiconductor device manufacturer customers.

Attempts to lessen the adverse effect of any loss or reduction through the rapid addition of new customers could be difficult because prospective customers typically require lengthy qualification

periods prior to placing volume orders with a new supplier. MKS' future success will continue to depend upon:

- its ability to maintain relationships with existing key customers;
- its ability to attract new customers; and
- the success of its customers in creating demand for their capital equipment products which incorporate MKS' products.

*As part of MKS' business strategy, MKS has entered into and may enter into or seek to enter into business combinations and acquisitions that may be difficult to integrate, disrupt its business, dilute stockholder value or divert management attention.* MKS acquired Compact Instrument in March 2000, Telvac in May 2000, Spectra in July 2000, D.I.P in September 2000 and ASTeX in January 2001. As a part of its business strategy, MKS may enter into additional business combinations and acquisitions. Acquisitions are typically accompanied by a number of risks, including the difficulty of integrating the operations and personnel of the acquired companies, the potential disruption of MKS' ongoing business and distraction of management, expenses related to the acquisition and potential unknown liabilities associated with acquired businesses.

If MKS is not successful in completing acquisitions that it may pursue in the future, it may be required to reevaluate its growth strategy and MKS may have incurred substantial expenses and devoted significant management time and resources in seeking to complete proposed acquisitions that will not generate benefits for it. In addition, with future acquisitions, MKS could use substantial portions of its available cash as all or a portion of the purchase price. MKS could also issue additional securities as consideration for these acquisitions, which could cause significant stockholder dilution. MKS' acquisitions of Compact Instrument, Telvac, Spectra, D.I.P. and ASTeX and any future acquisitions may not ultimately help MKS achieve its strategic goals and may pose other risks to MKS.

*An inability to convince semiconductor device manufacturers to specify the use of MKS' products to MKS' customers, who are semiconductor capital equipment manufacturers, would weaken MKS' competitive position.* The markets for MKS' products are highly competitive. Its competitive success often depends upon factors outside of its control. For example, in some cases, particularly with respect to mass flow controllers, semiconductor device manufacturers may direct semiconductor capital equipment manufacturers to use a specified supplier's product in their equipment. Accordingly, for such products, MKS' success will depend in part on its ability to have semiconductor device manufacturers specify that MKS' products be used at their semiconductor fabrication facilities. In addition, MKS may encounter difficulties in changing established relationships of competitors that already have a large installed base of products within such semiconductor fabrication facilities.

*If MKS' products are not designed into successive new generations of its customers' products, MKS will lose significant net sales during the lifespan of those products.* New products designed by semiconductor capital equipment manufacturers typically have a lifespan of five to ten years. MKS' success depends on its products being designed into new generations of equipment for the semiconductor industry. MKS must develop products that are technologically current so that they are positioned to be chosen for use in each successive new generation of semiconductor capital equipment. If MKS products are not

chosen by its customers, MKS' net sales may be reduced during the lifespan of its customers' products. In addition, MKS must make a significant capital investment to develop products for its customers well before its products are introduced and before it can be sure that it will recover its capital investment through sales to the customers in significant volume. MKS is thus also at risk during the development phase that its product may fail to meet its customers' technical or cost requirements and may be replaced by a competitive product or alternative technology solution. If that happens, MKS may be unable to recover MKS' development costs.

*The semiconductor industry is subject to rapid demand shifts which are difficult to predict. As a result, MKS' inability to expand its manufacturing capacity in response to these rapid shifts may cause a reduction in its market share.* MKS' ability to increase sales of certain products depends in part upon its ability to expand its manufacturing capacity for such products in a timely manner. If MKS is unable to expand its manufacturing capacity on a timely basis or to manage such expansion effectively, its customers could implement its competitors' products and, as a result, its market share could be reduced. Because the semiconductor industry is subject to rapid demand shifts which are difficult to foresee, MKS may not be able to increase capacity quickly enough to respond to a rapid increase in demand in the semiconductor industry. Additionally, capacity expansion could increase MKS' fixed operating expenses and if sales levels do not increase to offset the additional expense levels associated with any such expansion, its business, financial condition and results of operations could be materially adversely affected.

*Sales to foreign markets constitute a substantial portion of MKS' net sales; therefore, MKS net sales and results of operations could be adversely affected by downturns in economic conditions in countries outside of the United States.* International sales, which include sales by MKS' foreign subsidiaries, but exclude direct export sales (which were less than 10% of MKS' total net sales), accounted for approximately 29% of net sales in 2000, 31% of net sales in 1999 and 32% of net sales in 1998. In addition, international sales accounted for 20% of revenues in ASTeX's fiscal year 2000, 20% of revenues in its fiscal year 1999, and 23% of revenues in its fiscal year 1998. MKS anticipates that international sales will continue to account for a significant portion of MKS' net sales. In addition, certain of MKS' key domestic customers derive a significant portion of their revenues from sales in international markets. Therefore, MKS' sales and results of operations could be adversely affected by economic slowdowns and other risks associated with international sales.

*Unfavorable currency exchange rate fluctuations may lead to lower gross margins, or may cause MKS to raise prices which could result in reduced sales.* Currency exchange rate fluctuations could have an adverse effect on MKS' net sales and results of operations and MKS could experience losses with respect to its hedging activities. Unfavorable currency fluctuations could require MKS to increase prices to foreign customers which could result in lower net sales by MKS to such customers. Alternatively, if MKS does not adjust the prices for its products in response to unfavorable currency fluctuations, its results of operations could be adversely affected. In addition, sales made by MKS' foreign subsidiaries are denominated in the currency of the country in which these products are sold and the currency it receives in payment for such sales could be less valuable at the time of receipt as a result of exchange rate fluctuations. MKS enters into forward exchange contracts and local currency purchased options

to reduce currency exposure arising from intercompany sales of inventory. However, MKS cannot be certain that its efforts will be adequate to protect it against significant currency fluctuations or that such efforts will not expose it to additional exchange rate risks.

*Competition for personnel in the semiconductor and industrial manufacturing industries is intense.* MKS' success depends to a large extent upon the efforts and abilities of a number of key employees and officers, particularly those with expertise in the semiconductor manufacturing and similar industrial manufacturing industries. The loss of key employees or officers could have a material adverse effect on MKS' business, financial condition and results of operations. MKS believes that its future success will depend in part on its ability to attract and retain highly skilled technical, financial, managerial and marketing personnel. Competition for such personnel is intense, and MKS cannot be certain that it will be successful in attracting and retaining such personnel.

*MKS' proprietary technology is important to the continued success of its business. MKS' failure to protect this proprietary technology may significantly impair MKS' competitive position.* As of December 31, 2000, MKS owned 55 U.S. patents and 56 foreign patents and had 27 pending U.S. patent applications and 90 pending foreign patent applications. Although MKS seeks to protect its intellectual property rights through patents, copyrights, trade secrets and other measures, it cannot be certain that:

- MKS will be able to protect its technology adequately;
- competitors will not be able to develop similar technology independently;
- any of MKS' pending patent applications will be issued;
- intellectual property laws will protect MKS' intellectual property rights; or
- third parties will not assert that MKS' products infringe patent, copyright or trade secrets of such parties.

*Protection of MKS' intellectual property rights may result in costly litigation.* Litigation may be necessary in order to enforce MKS' patents, copyrights or other intellectual property rights, to protect its trade secrets, to determine the validity and scope of the proprietary rights of others or to defend against claims of infringement. For example, on November 30, 2000, ASTeX brought suit in federal district court in Delaware against Advanced Energy Industries, Inc. for infringement of ASTeX's patent related to its Astron product. Such litigation could result in substantial costs and diversion of resources and could have a material adverse effect on MKS' business, financial condition and results of operations.

*The market price of MKS' common stock has fluctuated and may continue to fluctuate for reasons over which MKS has no control.* The stock market has from time to time experienced, and is likely to continue to experience, extreme price and volume fluctuations. Recently, prices of securities of technology companies have been especially volatile and have often fluctuated for reasons that are unrelated to the operating performance of the companies. The market price of shares of MKS' common stock has fluctuated greatly since its initial public offering and could continue to fluctuate due to a variety of factors. In the past, companies that have experienced volatility in the market price of their stock have been the objects of securities class action litigation. If MKS were the object of securities class action litigation, it could result in substantial costs and a diversion of MKS' management's attention and resources.



*MKS's dependence on sole and limited source suppliers could affect its ability to manufacture products and systems.* MKS relies on sole and limited source suppliers for a few of its components and subassemblies that are critical to the manufacturing of MKS's products. This reliance involves several risks, including the following:

- the potential inability to obtain an adequate supply of required components;
- reduced control over pricing and timing of delivery of components; and
- the potential inability of its suppliers to develop technologically advanced products to support MKS's growth and development of new systems.

MKS believes that in time MKS could obtain and qualify alternative sources for most sole and limited source parts. Seeking alternative sources of the parts could require MKS to redesign its systems, resulting in increased costs and likely shipping delays. MKS may be unable to redesign its systems, which could result in further costs and shipping delays. These increased costs would decrease MKS' profit margins if it could not pass the costs to its customers. Further, shipping delays could damage MKS' relationships with current and potential customers and have a material adverse effect on MKS' business and results of operations.

*MKS is subject to governmental regulations.* MKS is subject to federal, state, local and foreign regulations, including environmental regulations and regulations relating to the design and operation of MKS' power supply products. MKS must ensure that these systems meet certain safety standards, many of which vary across the countries in which MKS' systems are used. For example, the European Union has published directives specifically relating to power supplies. MKS must comply with these directives in order to ship MKS' systems into countries that are members of the European Union. MKS believes it is in compliance with current applicable regulations, directives and standards and has obtained all necessary permits, approvals, and authorizations to conduct MKS' business. However, compliance with future regulations, directives and standards could require it to modify or redesign certain systems, make capital expenditures or incur substantial costs. If MKS does not comply with current or future regulations, directives and standards:

- MKS could be subject to fines;
- MKS' production could be suspended; or
- MKS could be prohibited from offering particular systems in specified markets.

*One stockholder, along with members of his family, continues to have a substantial interest in MKS.* As of January 31, 2001, John R. Bertucci, chairman and chief executive officer of MKS, and members of his family, in the aggregate, beneficially owned approximately 41.4% of MKS' outstanding common stock. As a result, these stockholders, acting together, are able to exert substantial influence over actions of MKS.

*Some provisions of MKS' restated articles of organization, MKS' by-laws and Massachusetts law could discourage potential acquisition proposals and could delay or prevent a change in control of MKS.* Anti-takeover provisions could diminish the opportunities for stockholders to participate in tender offers, including tender offers at a price above the then current market value of the common stock. Such provisions may also inhibit increases in the market price of the common stock that could result from takeover attempts. For example, while MKS has no present plans to issue any preferred stock, MKS' board of directors,

without further stockholder approval, may issue preferred stock that could have the effect of delaying, deterring or preventing a change in control of MKS. The issuance of preferred stock could adversely affect the voting power of the holders of MKS' common stock, including the loss of voting control to others. In addition, MKS' By-Laws provide for a classified board of directors consisting of three classes. The classified board could also have the effect of delaying, deterring or preventing a change in control of MKS.

#### **Market Risk and Sensitivity Analysis**

*Foreign Exchange Rate Risk.* MKS enters into forward exchange contracts and local currency purchased options to reduce currency exposure arising from intercompany sales of inventory. The potential fair value loss for a hypothetical 10% adverse change in forward currency exchange rates on MKS's forward exchange contracts at December 31, 2000 and 1999 would be \$146,000 and \$502,000, respectively. The potential loss in each year was estimated by calculating the fair value of the forward exchange contracts at December 31, 2000 and comparing that with those calculated using the hypothetical forward currency exchange rates.

The value of the local currency purchased options at December 31, 2000 and 1999 was immaterial.

At December 31, 2000, MKS had \$15,719,000 related to short-term borrowings denominated in Japanese yen. The carrying value of these short-term borrowings approximates fair value due to their short period to maturity. Assuming a hypothetical 10% adverse change in the Japanese yen to U.S. dollar year end exchange rate, the fair value of these short-term borrowings would increase by \$1,746,000. The potential increase in fair value was estimated by calculating the fair value of the short-term borrowings at December 31, 2000 and comparing that with the fair value using the hypothetical year end exchange rate.

At December 31, 1999, MKS had \$12,423,000 related to short-term borrowings denominated in Japanese yen. The carrying value of these short-term borrowings approximated fair market value due to their short period to maturity. Assuming a hypothetical 10% adverse change in the Japanese yen to U.S. dollar year end exchange rate in 1999, the fair value of these short-term borrowings would have increased by \$1,381,000. The potential increase in fair value was estimated by calculating the fair value of the short-term borrowings at December 31, 1999 and comparing that with the fair value using the hypothetical year end exchange rate.

*Interest Rate Risk.* MKS is exposed to fluctuations in interest rates in connection with its variable rate term loans. In order to minimize the effect of changes in interest rates on earnings, MKS entered into an interest rate swap that fixed the interest rate on its variable rate term loans. Under the swap agreement, MKS pays a fixed rate of 5.85% on the notional amount and receives LIBOR. At December 31, 2000 and 1999, the notional amount of the interest rate swap was equal to the principal amount of the variable rate term loans. The potential increase in the fair value of term loans resulting from a hypothetical 10% decrease in interest rates, after adjusting for the interest rate swap, was not material.

Due to its short-term duration, the fair value of the Company's cash and investment portfolio at December 31, 2000 and 1999 approximated its carrying value. Interest rate risk was estimated as the potential decrease in fair value resulting from a hypothetical 10% increase in interest rates for securities contained in the investment portfolio. The resulting hypothetical fair value was not materially different from the year-end carrying values.

### Supplemental Stockholder Information

*Price Range of Common Stock.* The Common Stock of MKS is traded on the Nasdaq National Market under the symbol MKSI. On February 28, 2001, the closing price of the Company's Common Stock, as reported on the Nasdaq National Market, was \$17.50 per share. The following table sets forth for the periods indicated the high and low sales prices per share of the Common Stock as reported by the Nasdaq National Market.

Price Range of Common Stock	2000		1999	
	High	Low	High	Low
First Quarter	62.2500	30.5000	14.5000	13.3750
Second Quarter	57.0000	31.8750	19.7500	11.8750
Third Quarter	40.7500	16.8125	22.5000	17.7500
Fourth Quarter	25.8125	14.2500	36.5000	19.2500

On February 28, 2001, MKS had approximately 276 stockholders of record.

*Dividend Policy.* MKS currently intends, subject to its contractual obligations under the Tax Indemnification and S Corporation Distribution Agreement, to retain earnings for the continued development of our business. Restrictions or limitations on the payment of dividends may be imposed in the future under the terms of credit agreements or under other contractual provisions. In the absence of such restrictions or limitations, the payment of any dividends will be at the discretion of the Board of Directors.





**Report of Independent Accountants**

To Board of Directors and Stockholders of MKS Instruments, Inc.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, stockholders' equity and cash flows present fairly, in all material respects, the financial position of MKS Instruments, Inc. and its subsidiaries at December 31, 2000 and 1999, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2000 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with auditing standards generally accepted in the United States of America, which 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, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

Boston, Massachusetts  
January 26, 2001

## Consolidated Balance Sheets

(in thousands, except share data)

December 31,	2000	1999
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 44,675	\$ 35,714
Short-term investments	5,731	28,132
Trade accounts receivable, net of allowance for doubtful accounts of \$1,197 and \$934 at December 31, 2000 and 1999, respectively	62,113	36,857
Inventories	49,218	27,650
Deferred tax asset	7,493	4,119
Other current assets	3,630	3,378
Total current assets	172,860	135,850
Property, plant and equipment, net	37,290	32,826
Long-term investments	13,100	1,063
Goodwill and acquired intangibles assets	36,709	---
Other assets	6,424	4,866
Total assets	\$266,383	\$174,605
<b>Liabilities and Stockholders' Equity</b>		
Current liabilities:		
Short-term borrowings	\$ 15,741	\$ 12,423
Current portion of long-term debt	1,354	7,346
Current portion of capital lease obligations	610	1,059
Accounts payable	16,851	7,683
Accrued compensation	12,902	9,202
Other accrued expenses	7,608	6,314
Income taxes payable	6,026	1,385
Distribution payable	---	3,350
Total current liabilities	61,092	48,762
Long-term debt	3,229	4,340
Long-term portion of capital lease obligations	947	1,322
Deferred tax liability	1,663	522
Other liabilities	517	490
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred Stock, \$0.01 par value, 2,000,000 shares authorized; none issued and outstanding	---	---
Common Stock, no par value, 50,000,000 shares authorized; 25,604,049 and 24,632,849 shares issued and outstanding at December 31, 2000 and 1999	113	113
Additional paid-in capital	116,267	84,713
Retained earnings	81,333	33,166
Shareholder receivable	---	(856)
Accumulated other comprehensive income	1,222	2,033
Total stockholders' equity	198,935	119,169
Total liabilities and stockholders' equity	\$266,383	\$174,605

### Consolidated Statements of Income

(in thousands, except per share data)

Year Ended December 31,	2000	1999	1998
Net sales	\$326,955	\$187,083	\$139,763
Cost of sales	176,580	107,228	83,784
Gross profit	150,375	79,855	55,979
Research and development	23,011	13,230	12,137
Selling, general and administrative	50,888	39,014	34,707
Amortization of goodwill and acquired intangible assets	3,987	---	---
Purchase of in-process technology	310	---	---
Income from operations	72,179	27,611	9,135
Interest expense	1,390	1,346	1,483
Interest income	3,369	2,154	296
Other income (expense), net	(209)	849	187
Income before income taxes	73,949	29,268	8,135
Provision for income taxes (Note 9)	27,715	5,231	949
Net income	\$ 46,234	\$ 24,037	\$ 7,186
Historical net income per share:			
Basic	\$ 1.84	\$ 1.05	\$ 0.40
Diluted	\$ 1.76	\$ 1.00	\$ 0.38
Historical weighted average common shares outstanding:			
Basic	25,175	22,784	18,053
Diluted	26,296	23,954	18,720
Pro forma data (unaudited):			
Historical income before income taxes		\$ 29,268	\$ 8,135
Pro forma provision for income taxes assuming C corporation tax		10,856	3,091
Pro forma net income		\$ 18,412	\$ 5,044
Pro forma net income per share:			
Basic		\$ 0.81	\$ 0.28
Diluted		\$ 0.77	\$ 0.27
Pro forma weighted average common shares outstanding:			
Basic		22,784	18,053
Diluted		23,786	18,538

## Consolidated Statements of Stockholders' Equity

For the years ended December 31, 2000, 1999 and 1998

(in thousands, except share data)

	Common Stock				Additional			Accumulated		Total Stockholders' Equity	
	Class A		Class B		Common Stock	Paid-In Capital	Retained Earnings	Shareholder Receivable	Comprehensive Income		Comprehensive Income
	Shares	Amount	Shares	Amount							
Balance at December 31, 1997	7,766,910	\$40	10,286,255	\$73		\$48	\$51,443		\$1,244		\$52,848
Distributions to stockholders							(6,150)				(6,150)
Issuance of common stock			2								
Comprehensive income:											
Net income							7,186			\$ 7,186	7,186
Other comprehensive income, net of taxes:											
Foreign currency translation adjustment									992	992	992
Unrealized loss on investments									(50)	(50)	(50)
Comprehensive income										<u>\$ 8,128</u>	
Balance at December 31, 1998	7,766,910	40	10,286,257	73		48	52,479		2,186		54,826
Distributions to stockholders							(40,000)				(40,000)
Distributions payable to stockholders							(3,350)				(3,350)
Conversion to Common Stock	(7,766,910)	(40)	(10,286,257)	(73)	18,053,167	113					
Issuance of common stock from:											
Initial Public Offering					6,375,000		82,062				82,062
Issuance of common stock from exercise of stock options and Employee Stock Purchase Plan					204,682		1,230				1,230
Tax benefit from exercise of stock options							1,112				1,112
Stock options compensation							261				261
Shareholder receivable								(856)			(856)
Comprehensive income:											
Net income							24,037			24,037	24,037
Other comprehensive income, net of taxes:											
Non-recurring deferred tax charge to comprehensive income (Note 9)									(660)	(660)	(660)
Impact of adopting SFAS No. 133									(16)	(16)	(16)
Changes in value of financial instruments designated as cash flow hedges									(212)	(212)	(212)
Foreign currency translation adjustment									(80)	(80)	(80)
Unrealized gain (loss) on investments									815	815	815
Comprehensive income										<u>\$23,884</u>	
Balance at December 31, 1999	---	---	---	---	24,632,849	113	84,713	33,166	(856)	2,033	119,169
Adjustment to Distributions payable to stockholders								1,933			1,933
Issuance of common stock from exercise of stock options and Employee Stock Purchase Plan					419,385		3,340				3,340
Tax benefit from exercise of stock options							4,078				4,078
Stock and stock options issued in acquisition of businesses					551,815		24,136				24,136
Shareholder receivable								856			856
Comprehensive income:											
Net income							46,234			46,234	46,234
Other comprehensive income, net of taxes:											
Changes in value of financial instruments designated as cash flow hedges									603	603	603
Foreign currency translation adjustment									(765)	(765)	(765)
Unrealized gain (loss) on investments									(649)	(649)	(649)
Comprehensive income										<u>\$45,423</u>	
Balance at December 31, 2000	---	---	---	---	25,604,049	\$113	\$116,267	\$ 81,333	\$ ---	\$ 1,222	\$ 198,935

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

**Consolidated Statements of Cash Flows**  
(in thousands)

Year Ended December 31,	2000	1999	1998
Cash flows from operating activities:			
Net income	\$ 46,234	\$ 24,037	\$ 7,186
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	10,524	6,209	6,242
(Gain) loss on disposal of property, plant and equipment	62	(181)	48
Deferred taxes	(3,137)	(266)	(32)
Non-recurring deferred tax credit	---	(3,770)	---
Other	231	257	253
Forward exchange contract loss (gain) realized	---	9	(1,211)
Purchase of in-process research and development	310	---	---
Stock option compensation	---	261	---
Changes in operating assets and liabilities, net of effects of businesses acquired:			
Trade accounts receivable	(23,059)	(15,922)	12,908
Inventories	(18,402)	(2,908)	6,479
Other current assets	410	(1,000)	554
Accrued compensation	3,700	5,217	(3,516)
Accrued expenses	2,357	1,019	(1,602)
Accounts payable	6,197	4,022	(3,682)
Income taxes payable	8,607	106	(647)
Net cash provided by operating activities	34,034	17,090	22,980
Cash flows from investing activities:			
Purchases of short-term and long-term investments	(29,795)	(45,999)	---
Maturities and sales of short-term and long-term investments	39,044	18,654	---
Purchases of property, plant and equipment	(10,996)	(5,505)	(3,137)
Proceeds from sale of property, plant and equipment	65	318	60
Business combinations, net of cash acquired	(17,539)	---	---
Increase in other assets	(411)	(853)	(270)
Cash received (used) to settle forward exchange contracts	---	(9)	1,211
Net cash used in investing activities	(19,632)	(33,394)	(2,136)
Cash flows from financing activities:			
Proceeds from short-term borrowings	42,124	11,250	15,242
Payments on short-term borrowings	(37,226)	(9,825)	(17,569)
Principal payments on long-term debt	(10,800)	(2,424)	(2,057)
Proceeds from issuance of common stock, net of issuance costs	---	82,062	---
Proceeds from exercise of stock options and Employee Stock Purchase Plan	3,340	1,230	---
Cash distributions to stockholders	(1,417)	(40,000)	(6,150)
Principal payments under capital lease obligations	(1,064)	(1,050)	(1,257)
Net cash provided by (used in) financing activities	(5,043)	41,243	(11,791)
Effect of exchange rate changes on cash and cash equivalents	(398)	(413)	(376)
Increase in cash and cash equivalents	8,961	24,526	8,677
Cash and cash equivalents at beginning of period	35,714	11,188	2,511
Cash and cash equivalents at end of period	\$ 44,675	\$ 35,714	\$ 11,188
Supplemental disclosure of cash flow information:			
Cash paid during the period for:			
Interest	\$ 1,416	\$ 1,377	\$ 1,526
Income taxes	\$ 20,332	\$ 10,017	\$ 1,608
Supplemental schedule of noncash investing and financial activities:			
Capital lease obligations incurred for the purchase of new equipment	\$ ---	\$ 762	\$ 1,138
Acquisitions			
Fair value of assets acquired	\$ 51,678	\$ ---	\$ ---
Less: liabilities assumed	8,449	---	---
Stock and options issued	24,136	---	---
Debt issued	752	---	---
Cash acquired	802	---	---
Acquisitions, net of cash acquired	\$ 17,539	\$ ---	\$ ---

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

## Notes to Consolidated Financial Statements

(Tables in thousands, except per share data)

### 1) Description of Business.

MKS Instruments, Inc. (the "Company" or "MKS") is a worldwide developer, manufacturer, and supplier of instruments and components that are used to measure, control and analyze gases in semiconductor manufacturing and similar industrial manufacturing processes. The Company's products include pressure and flow measurement and control instruments; vacuum gauges, valves and components; gas analysis instruments; and digital process control network products. The Company is subject to risks common to companies in the semiconductor industry including, but not limited to, the highly cyclical nature of the semiconductor industry leading to recurring periods of over supply, development by the Company or its competitors of new technological innovations, dependence on key personnel and the protection of proprietary technology.

### 2) Summary of Significant Accounting Policies.

*Basis of Presentation.* The consolidated financial statements include the accounts of the Company and its subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation.

*Historical and Pro Forma (Unaudited) Net Income Per Share.* The Company computes basic and diluted earnings per share in accordance with Statement of Financial Accounting Standards No. 128 ("SFAS 128") "Earnings per Share." SFAS 128 requires both basic earnings per share, which is based on the weighted average number of common shares outstanding, and diluted earnings per share, which is based on the weighted average number of common shares outstanding and all dilutive potential common equivalent shares outstanding. The dilutive effect of options is determined under the treasury stock method using the average market price for the period. Common equivalent shares are included in the per share calculations where the effect of their inclusion would be dilutive.

Historical net income per share in 1999 and 1998 is not meaningful because of the Company's conversion from an S corporation to a C corporation upon the closing of its initial public offering in 1999. Historical net income has been adjusted for the pro forma provision for income taxes calculated assuming the Company was subject to income taxation as a C corporation, at a pro forma tax rate of 38.0% in 1998, and at a pro forma tax rate of 37.1% in 1999.

The following is a reconciliation of basic to diluted pro forma and historical net income per share:

For the Year Ended December 31	2000		1999		1998
	Historical	Pro forma	Historical	Pro forma	Historical
Net income	\$ 46,234	\$18,412	\$24,037	\$5,044	\$7,186
Shares used in net income					
per common shares – basic	25,175	22,784	22,784	18,053	18,053
Effect of dilutive securities:					
Employee and director stock options	1,121	1,002	1,170	485	667
Shares used in net income					
per common share – diluted	26,296	23,786	23,954	18,538	18,720
Net income per common share – basic	\$ 1.84	\$ 0.81	\$ 1.05	\$ 0.28	\$ 0.40
Net income per common share – diluted	\$ 1.76	\$ 0.77	\$ 1.00	\$ 0.27	\$ 0.38

For purposes of computing diluted earnings per share, weighted average common share equivalents do not include stock options with an exercise price greater than the average market price of the common shares during the period. Options to purchase 308,708, 33,500, and 24,643 shares of common stock were outstanding during 2000, 1999 and 1998, respectively, but were not included in the calculation of diluted net income per common share because the option price was greater than the average market price of the common shares during the period.

*Foreign Exchange.* The functional currency of the Company's foreign subsidiaries is the applicable local currency. For those subsidiaries, assets and liabilities are translated to U.S. dollars at year-end exchange rates. Income and expense accounts are translated at the average exchange rates prevailing for the year. The resulting translation adjustments are included in accumulated other comprehensive income in consolidated stockholders' equity.

*Revenue Recognition.* Revenue from product sales is generally recognized upon shipment provided that persuasive evidence of an arrangement exists, the sales price is fixed or determinable, collectibility is reasonably assured and title and risk of loss have passed to the customer. The Company has no obligations to customers after the date products are shipped other than pursuant to warranty obligations. The Company provides for the estimated costs to fulfill customer warranty and other contractual obligations upon the recognition of the related revenue. Shipping and handling fees, if any, billed to customers are recognized as revenue. The related costs are recognized in cost of sales.

*Cash and Cash Equivalents and Investments.* All highly liquid investments with an original maturity of three months or less at the date of purchase are considered to be cash equivalents.

Cash equivalents consist of the following:

December 31,	2000	1999
Cash and Money Market Instruments	\$ 34,175	\$ 22,156
Commercial Paper	---	5,558
Federal Government and Government Agency Obligations	---	6,000
State and Municipal Government Obligations	2,000	---
Corporate Obligations	8,500	2,000
	<u>\$ 44,675</u>	<u>\$ 35,714</u>

Short-term available-for-sale investments maturing within one year consist of the following:

December 31,	2000	1999
Federal Government and Government Agency Obligations	\$ 4,101	\$ 16,245
Corporate Obligations	1,000	5,501
Commercial Paper	---	4,641
Equity Securities	630	1,745
	<u>\$ 5,731</u>	<u>\$ 28,132</u>

Long-term available-for-sale investments consist of the following:

December 31,	2000	1999
Federal Government and Government Agency Obligations	\$ ---	\$ 1,063
State and Municipal Government Obligations	13,100	---
	<u>\$ 13,100</u>	<u>\$ 1,063</u>

The appropriate classification of investments in debt and equity securities is determined at the time of purchase. Debt securities that the Company has both the intent and ability to hold to maturity are carried at amortized cost. Debt securities that the Company does not have the intent and ability to hold to maturity or equity securities are classified either as "available-for-sale" or as "trading" and are carried at fair value. Marketable equity securities are carried at fair value and classified either as available-for-sale or trading. Unrealized gains and losses on securities classified as available-for-sale are included in accumulated other comprehensive income in consolidated stockholders' equity. Unrealized gains and losses on securities classified as trading are reported in earnings. The cost of securities sold is based on the specific identification method.

*Inventories.* Inventories are stated at the lower of cost or market. Cost is determined on the first-in, first-out method.

*Property, Plant and Equipment.* Property, plant and equipment are stated at cost. Equipment acquired under capital leases is recorded at the present value of the minimum lease payments required during the lease period. Expenditures for major renewals and betterments that extend the useful lives of property, plant and equipment are capitalized. Expenditures for maintenance and repairs are charged to expense as incurred. When assets are sold or otherwise disposed of, the cost and related accumulated depreciation are eliminated from the accounts and any resulting gain or loss is recognized in earnings.

Depreciation is provided on the straight-line method over the estimated useful lives of 20 years for buildings and three to five years for machinery and equipment. Leasehold improvements are amortized over the shorter of the lease term or the estimated useful life of the leased asset.

*Intangible Assets.* Intangible assets resulting from the acquisitions of entities accounted for using the purchase method of accounting are estimated by management based on the fair value of assets received. These include acquired customer lists, workforce, technology, patents, trade name, covenants not to compete and goodwill. Intangible assets are amortized from three to seven years on a straight-line basis which represents the estimated periods of benefit.

*Impairment of Long-Lived Assets.* The Company evaluates the recoverability of its long-lived assets in accordance with Statement of Financial Accounting Standards "SFAS" No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of." SFAS No. 121 requires recognition of impairment of long-lived assets in the event the net book value of such assets exceeds the future undiscounted cash flows attributable to such assets.

*Research and Development.* Research and development costs are expensed as incurred.

*New Accounting Pronouncements.* In December 1999, the Securities and Exchange Commission issued Staff Accounting Bulletin No 101 ("SAB 101"), "Revenue Recognition". SAB 101 summarizes the staff's view in applying generally accepted accounting principles to revenue recognition. The Company adopted SAB 101 in fiscal year 2000. The adoption did not have a material affect on its financial statements.

*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 and disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates.



### 3) Financial Instruments and Risk Management.

*Foreign Exchange Risk Management.* The Company adopted the provisions of SFAS No.133 effective April 1, 1999. The impact of adopting SFAS No.133 was the recording of an unrealized loss of \$16,000, net of taxes, in other comprehensive income. The Company hedges a portion of its forecasted foreign currency denominated intercompany sales of inventory, over a maximum period of fifteen months, using forward exchange contracts and currency options primarily related to Japanese and European currencies. These derivatives are designated as cash-flow hedges, and changes in their fair value are carried in accumulated other comprehensive income until the underlying forecasted transaction occurs. Once the underlying forecasted transaction is realized, the appropriate gain or loss from the derivative designated as a hedge of the transaction is reclassified from accumulated other comprehensive income to cost of sales. The Company utilizes an interest rate swap to fix the interest rate on certain variable term loans in order to minimize the effect of changes in interest rates on earnings. During 2000 and 1999, net realized gains of \$6,000 and net realized losses of \$104,000, respectively, were recorded in earnings. As of December 31, 2000 the amount that will be reclassified from accumulated other comprehensive income to earnings over the next twelve months is an unrealized gain of \$375,000, net of taxes. The ineffective portion of the derivatives is primarily related to option premiums, is recorded in cost of sales, and was \$304,000 in 2000.

Prior to the adoption of SFAS No. 133, the Company entered into forward exchange contracts and local currency purchased options to hedge a portion of its probable anticipated, but not firmly committed transactions. The anticipated transactions whose risks were being hedged were the intercompany sales of inventory by the U.S. parent to the foreign subsidiary payable in the foreign subsidiary's local currency. The time period of the anticipated transactions that were hedged generally approximated one year. The Company also used forward exchange contracts to hedge firm commitments. Market value gains and losses on forward exchange contracts were recognized immediately in earnings unless a firm commitment existed. Market value gains and premiums on local currency purchased options on probable anticipated transactions and market value gains and losses on forward exchange contracts hedging firm commitments were recognized when the hedged transaction occurred. These contracts, which related primarily to Japanese and European currencies generally had terms of twelve months or less. Forward exchange contracts received hedge accounting on firmly committed transactions when they were designated as a hedge of the designated currency exposure and were effective in minimizing such exposure. Options received hedge accounting on probable anticipated transactions when they were designated as a hedge of the currency exposure and were effective in minimizing such exposure.

Realized and unrealized gains and losses on forward exchange contracts and local currency purchased option contracts that do not qualify for hedge accounting are recognized immediately in earnings. The cash flows resulting from forward exchange contracts and local currency purchased options that qualify for hedge accounting are classified in the statement of cash flows as part of cash flows from operating activities. Cash flows resulting from forward exchange contracts and local currency purchased options that do not qualify for hedge accounting are classified in the statement of cash flows as investing activities. The company does not hold or issue derivative financial instruments for trading purposes.

Forward exchange contracts with notional amounts totaling \$1,500,000, \$4,000,000 and \$8,000,000 to exchange foreign currencies for U.S. dollars were outstanding at December 31, 2000, 1999 and 1998, respectively. Of such forward exchange contracts, \$1,500,000, \$4,000,000 and \$7,800,000 to exchange Japanese yen for U.S. dollars, were outstanding at December 31, 2000, 1999 and 1998, respectively. Local currency purchased options with notional amounts totaling \$25,390,000, \$11,800,000 and \$10,221,000 to exchange foreign currencies for U.S. dollars were outstanding at December 31, 2000, 1999 and 1998, respectively.

Foreign exchange gains of \$37,000 and \$415,000 and foreign exchange losses of \$168,000 on forward exchange contracts which did not qualify for hedge accounting were recognized in earnings during 2000, 1999 and 1998, respectively, and are classified in Other income, net. Gains and losses on forward exchange contracts and local currency purchased options that qualify for hedge accounting are classified in cost of goods sold and totaled a gain of \$6,000, a loss of \$104,000 and a gain of \$310,000 for the years ended December 31, 2000, 1999 and 1998, respectively.

The fair values of forward exchange contracts at December 31, 2000 and 1999, determined by applying period end currency exchange rates to the notional contract amounts, amounted to an unrealized gain of \$164,000 and an unrealized loss of \$547,000, respectively. The fair values of local currency purchased options at December 31, 2000 and 1999, which were obtained through dealer quotes were immaterial.

The Company recorded a foreign exchange translation gain on intercompany payables of \$1,000,000 in Other income, net in 1998. The Company has hedged certain intercompany payables with currency options. Since these derivatives hedge existing amounts that are denominated in foreign currencies, the options do not qualify for hedge accounting under SFAS No.133.

The market risk exposure from forward exchange contracts is assessed in light of the underlying currency exposures and is controlled by the initiation of additional or offsetting foreign currency contracts. The market risk exposure from options is limited to the cost of such investments.

*Interest Rate Risk Management.* The Company utilizes an interest rate swap to fix the interest rate on certain variable rate term loans in order to minimize the effect of changes in interest rates on earnings. In 1998, the Company entered into a four-year interest rate swap agreement on a declining notional amount basis which matches with the scheduled principal payments with a major financial institution for the notional amount of \$10,528,000 equal to the term loans described in Note 6. Under the agreement, the Company pays a fixed rate of 5.85% on the notional amount and receives LIBOR. The interest differential payable or accruable on the swap agreement is recognized on an accrual basis as an adjustment to interest expense. The criteria used to apply hedge accounting for this interest rate swap is based upon management designating the swap as a hedge against the variable rate debt combined with the terms of the swap matching the underlying debt including the notional amount, the timing of the interest reset dates, the indices used and the paydates. At December 31, 2000, the fair value of this interest rate swap, which represents the amount the Company would receive or pay to terminate the agreement, is not material, based on dealer quotes. The variable rate received on the swap at December 31, 2000 was 6.82125%.

The market risk exposure from the interest rate swap is assessed in light of the underlying interest rate exposures. Credit risk exposure from the swap is minimized as the agreement is with a major financial institution. The Company monitors the credit worthiness of this financial institution and full performance is anticipated.

*Concentrations of Credit Risk.* The Company's significant concentrations of credit risk consist principally of cash and cash investments, forward exchange contracts, and trade accounts receivable. The Company maintains cash and cash equivalents with financial institutions including the bank it has borrowings with. The Company maintains cash investments primarily in U.S. Treasury and government agency securities and corporate debt securities, rated AA or higher, which have minimal credit risk. The Company places forward currency contracts with high credit-quality financial institutions in order to minimize credit risk exposure. Concentrations of credit risk with respect to accounts receivable are limited due to the large number of diverse and geographically dispersed customers. Credit is extended for all customers based on financial condition and collateral is not required.

*Fair Value of Financial Instruments.* The fair value of the term loans, including the current portion, approximates its carrying value given its variable rate interest provisions. The fair value of marketable securities is based on quoted market prices. The fair value of mortgage notes is based on borrowing rates for similar instruments and approximates its carrying value. For all other balance sheet financial instruments, the carrying amount approximates fair value because of the short period to maturity of these instruments.

#### 4) Inventories.

Inventories consist of the following:

December 31,	2000	1999
Raw material	\$12,060	\$ 6,644
Work in process	14,703	7,026
Finished goods	22,455	13,980
	<u>\$49,218</u>	<u>\$27,650</u>

#### 5) Property, Plant and Equipment.

Property, plant and equipment consist of the following:

December 31,	2000	1999
Land	\$ 8,677	\$ 9,100
Buildings	25,003	26,081
Machinery and equipment	32,787	30,175
Furniture and fixtures	15,554	12,968
Leasehold improvements	2,142	1,966
	<u>84,163</u>	<u>80,290</u>
Less: accumulated depreciation and amortization	<u>46,873</u>	<u>47,464</u>
	<u>\$37,290</u>	<u>\$32,826</u>

Depreciation and amortization of property, plant and equipment totaled \$6,537,000, \$6,209,000 and \$6,242,000 for the years ended December 31, 2000, 1999 and 1998, respectively. During the year ended December 31, 2000, MKS retired \$6,727,000 of fully depreciated property, plant and equipment.

#### 6) Debt.

*Credit Agreements and Short-Term Borrowings.* In February 1996, the Company entered into loan agreements with two banks, which provided access to a revolving credit facility. The revolving credit facility provided for uncollateralized borrowings up to \$30,000,000, and expired on December 31, 1999. Interest on borrowings was payable quarterly at either the banks' base rate or the LIBOR Rate, as defined in the agreement, at the Company's option. At December 31, 1999, the Company had no borrowings under this revolving credit facility.

Effective January 1, 2000, the Company entered into a loan agreement with the same two banks, which provides access to a revolving credit facility. The revolving credit facility provides for uncollateralized borrowings up to \$40,000,000, and expires April 30, 2001. Interest on borrowings is payable quarterly at either the banks' base rate, or the LIBOR Rate, as defined in the agreement.

Additionally, certain of the Company's foreign subsidiaries have lines of credit and short-term borrowing arrangements with various financial institutions which provide for aggregate borrowings as of December 31, 2000 of up to \$17,533,000, which generally expire and are renewed at six month intervals. At December 31, 2000 and 1999, total borrowings outstanding under these arrangements were

\$15,719,000 and \$12,423,000, respectively, at interest rates ranging from 1.350% to 1.875% and 1.2% to 1.7%, respectively. A portion of the foreign short-term borrowings are guaranteed by a domestic bank.

*Long-Term Debt.* Long-term debt consists of the following:

December 31,	2000	1999
Term Loans	\$2,620	\$ 8,862
Mortgage notes	1,963	2,824
Total long-term debt	4,583	11,686
Less: current portion	1,354	7,346
Long-term debt less current portion	\$3,229	\$ 4,340

On November 1, 1993, the Company entered into a term loan agreement with a bank, which provided for borrowings of \$10,000,000. The final principal amount on this term loan was paid in November 2000. The loan was collateralized by certain land, buildings, and equipment. Interest was payable monthly at either the bank's base rate, at a rate based on the long-term funds rate, or at the LIBOR Rate, as defined in the agreement, at the Company's option. On October 31, 1995, the Company also entered into a term loan agreement with the same bank, which provided additional uncollateralized borrowings of \$7,000,000. Principal payments are payable in equal monthly installments of \$83,000 through June 1, 2002, with the remaining principal payment due on June 30, 2002. Interest is payable monthly at either the bank's base rate or at the LIBOR Rate, as defined in the agreement, at the Company's option.

In connection with the purchase of Telvac Engineering, Ltd., the Company issued term loans of \$752,000. Principal payments of \$51,000 are due on an annual basis through December 1, 2004 with the remaining principal due on May 1, 2005. Interest is payable semi-annually at the UK base rate.

At December 31, 2000, the interest rates in effect for the outstanding term loan borrowings ranged from 6.0% to 7.51625% and was 7.40% at December 31, 1999.

The terms of the revolving credit facility and term loan agreements, as amended, contain, among other provisions, requirements for maintaining certain levels of tangible net worth and other financial ratios. The agreement also contains restrictions with respect to acquisitions. Under the most restrictive covenant, the operating cash flow to debt service ratio for a fiscal quarter shall not be less than 1.25 to 1.0. In the event of default of these covenants or restrictions, any obligation then outstanding under the loan agreement shall become payable upon demand by the bank.

The Company has loans outstanding from various foreign banks in the form of mortgage notes at interest rates ranging from 2.0% to 6.1%. Principal and interest are payable in monthly installments through 2010. The loans are collateralized by mortgages on certain of the Company's foreign properties.

Aggregate maturities of long-term debt over the next five years are as follows:

Year ending December 31,	Aggregate Maturities
2001	\$1,354
2002	1,324
2003	410
2004	414
2005	713
Thereafter	368
	\$4,583

**7) Commitments and Contingencies.**

The Company leases certain of its facilities and machinery and equipment under capital and operating leases expiring in various years through 2002 and thereafter. Generally, the facility leases require the Company to pay maintenance, insurance and real estate taxes. Rental expense under operating leases totaled \$3,037,000, \$2,950,000 and \$2,388,000, for the years ended December 31, 2000, 1999 and 1998, respectively.

Minimum lease payments under operating and capital leases are as follows:

Year ending December 31,	Operating Leases	Capital Leases
2001	\$2,823	\$ 675
2002	1,654	614
2003	1,464	291
2004	1,316	106
2005	1,062	---
Thereafter	1,574	---
Total minimum lease payments	\$9,893	1,686
Less: amounts representing interest		129
Present value of minimum lease payments		1,557
Less: current portion		610
Long-term portion		<u>\$ 947</u>

Prior to its initial public offering, the Company entered into a Tax Indemnification and S Corporation Distribution Agreement with its then existing stockholders (the "Pre-IPO stockholders"). The agreement includes provisions for the payment, with interest, by the Pre-IPO stockholders or MKS, as the case may be, for the difference between the \$40,000,000 distributed as an estimate of the amount of the accumulated adjustments account as of April 4, 1999, which is the date the Company's S Corporation status was terminated, and the actual amount of the accumulated adjustments account on that day. The actual amount of the accumulated adjustments account was \$41,416,619. Accordingly, the Company made an additional distribution of \$1,416,619, plus interest of \$177,524, to the Pre-IPO stockholders during the three months ended September 30, 2000. The amount of the additional distribution payable had been estimated to be \$3,350,000. This estimated amount was charged directly to retained earnings during 1999 and had no impact on net income or earnings per share. The difference between the actual additional distribution and the estimated additional distribution was credited directly to retained earnings during the three months ended September 30, 2000 and had no impact on net income or earnings per share. The amount of the accumulated adjustments account can be affected by future income tax audits of MKS. If any audit increases or decreases the accumulated adjustments account, MKS or the Pre-IPO stockholders, as the case may be, will also be required to make a payment, with interest, of such difference to the other party. No shareholders, other than the Pre-IPO stockholders, are parties to the Tax Indemnification and S Corporation Distribution Agreement.

**8) Stockholders' Equity.**

*Common Stock.* In March 1999, the Company amended its Articles of Organization to: i) eliminate the authorized shares of Class A Common Stock and Class B Common Stock; ii) increase the authorized number of shares of Common Stock to 50,000,000 shares; iii) authorize 2,000,000 shares of Preferred Stock, \$0.01 par value per share; and iv) provide that each outstanding share of Class A Common Stock and Class B Common Stock be converted into one share of Common Stock.

On April 5, 1999 the Company closed the initial public offering of its Common Stock. In connection with this offering and the exercise of an over-allotment option by the underwriters, the Company sold

6,375,000 shares of Common Stock at a price of \$14.00 per share. The net proceeds to the Company were approximately \$82,000,000. Underwriting discounts and commissions were approximately \$6,200,000 and other offering costs were approximately \$1,000,000.

On April 5, 1999 the Company distributed \$40,000,000, which was the estimated amount of the Company's undistributed S corporation earnings as of the day prior to the closing of the offering.

*Stock Purchase Plans.* The Company's 1999 Employee Stock Purchase Plan (the "Purchase Plan") authorizes the issuance of up to an aggregate of 450,000 shares of Common Stock to participating employees. Offerings under the Purchase Plan commence on June 1 and December 1 and terminate, respectively, on November 30 and May 31. Under the Purchase Plan, eligible employees may purchase shares of Common Stock through payroll deductions of up to 10% of their compensation. The price at which an employee's option is exercised is the lower of (1) 85% of the closing price of the Common Stock on the NASDAQ National Market on the day that each offering commences or (2) 85% of the closing price on the day that each offering terminates. During 2000 and 1999 the Company issued 83,118 and 36,520 shares, respectively, of Common Stock to employees who participated in the Purchase Plan at exercise prices of \$21.04 and \$12.86 in 2000 and at an exercise price of \$12.94 per share in 1999. As of December 31, 2000 there were 330,362 shares reserved for issuance.

The Company's Amended and Restated 1999 Foreign Employee Stock Purchase Plan (the "Foreign Purchase Plan") authorizes the issuance of up to an aggregate of 50,000 shares of Common Stock to participating employees. The initial offering under the Foreign Purchase Plan commenced on March 1, 2000 and terminated May 31, 2000. Additional offerings under the Foreign Purchase Plan commence on June 1 and December 1 and terminate, respectively, on November 30 and May 31. Under the Foreign Purchase Plan, eligible employees may purchase shares of Common Stock through payroll deductions of up to 10% of their compensation. The price at which an employee's option is exercised is the lower of (1) 85% of the closing price of the Common Stock on the NASDAQ National Market on the day that each offering commences or (2) 85% of the closing price on the day that each offering terminates. During 2000, the Company issued 7,248 shares of Common Stock to employees who participated in the Foreign Purchase Plan at exercise prices of \$33.47 and \$12.86 per share. As of December 31, 2000 there were 42,752 shares reserved for issuance.

*Stock Option Plans.* On January 9, 1998, the stockholders of the Company approved the following: (1) an increase in the number of shares that may be granted under the 1995 Stock Incentive Plan to 3,750,000 shares of common stock; (2) the adoption of the 1997 Director Stock Option Plan pursuant to which options may be granted to purchase up to an aggregate of 300,000 shares of common stock; (3) the adoption of the 1997 Employee Stock Purchase Plan pursuant to which the Company may issue up to an aggregate of 450,000 shares of common stock; and (4) that 3,750,000 shares, 300,000 shares, and 450,000 shares of common stock be reserved for issuance under the 1995 Stock Incentive Plan, the 1997 Director Stock Option Plan, and the 1997 Employee Stock Purchase Plan, respectively. The 1997 Employee Stock Purchase Plan was amended and restated on April 22, 1999, and the Plan's name was changed to the Amended and Restated 1999 Employee Stock Purchase Plan.

In May 2000, the stockholders of the Company approved an annual increase in the number of shares that may be granted under the 1995 Stock Incentive Plan of 4% of the total shares of the Company's stock on July 1 of each year. The annual increase will occur until such time as the aggregate number of shares which may be issued under the Plan is 9,750,000 shares, subject to adjustment for certain changes in MKS' capitalization.

The Company grants options to employees under the 1995 Stock Incentive Plan (the "Plan") and to directors under the 1996 Director Stock Option Plan and the 1997 Director Stock Option Plan (the "Director Plans").

At December 31, 2000, 1,428,846 options to purchase shares of the Company's common stock were reserved for issuance under the Plan. At December 31, 2000, under the Director Plans, options to purchase 210,000 shares of common stock were reserved for issuance. Stock options are granted at 100% of the fair value of the Company's common stock. Generally, stock options granted under the Plan prior to 2000 vest 20% after one year and 5% per quarter thereafter, and expire 10 years after the grant date. Generally, stock options granted under the Plan in 2000 vest 25% after one year and 6.25% per quarter thereafter, and expire 10 years after the grant date. Under the Director Plans, certain options granted in 1999 vest immediately. The remainder of the options granted in 1997 and later vest at the earlier of (1) the next annual meeting, (2) 13 months from date of grant, or (3) the effective date of an acquisition as defined in the Director Plans.

The following table presents the activity for options under the Plan:

Year Ended December 31,	2000		1999		1998	
	<i>Options</i>	<i>Weighted Average Exercise Price</i>	<i>Options</i>	<i>Weighted Average Exercise Price</i>	<i>Options</i>	<i>Weighted Average Exercise Price</i>
Outstanding — beginning of period	2,552,223	\$ 8.21	2,098,207	\$ 5.20	1,564,449	\$ 4.50
Granted	637,092	27.91	678,971	16.40	629,969	6.80
Exercised	(303,927)	5.25	(168,162)	4.56	(2)	4.43
Forfeited or Expired	(32,508)	15.78	(56,793)	5.76	(96,209)	4.43
Outstanding — end of period	2,852,880	\$ 12.84	2,552,223	\$ 8.21	2,098,207	\$ 5.20
Exercisable at end of period	1,423,935	\$ 6.64	1,047,748	\$ 4.82	778,473	\$ 4.46

The following table summarizes information with respect to options outstanding and exercisable under the Plan at December 31, 2000:

	Options Outstanding			Options Exercisable	
	<i>Number of Shares</i>	<i>Weighted Average Exercise Price</i>	<i>Weighted Average Remaining Contractual Life (in years)</i>	<i>Number of Shares</i>	<i>Weighted Average Exercise Price</i>
\$4.43 - \$8.92	1,653,117	\$ 5.50	6.66	1,223,622	\$ 5.18
\$11.98 - \$14.50	509,646	\$ 14.09	8.32	169,188	\$ 13.97
\$17.94 - \$30.44	282,200	\$ 23.76	9.26	31,125	\$ 24.30
\$32.00 - \$61.50	407,917	\$ 33.43	9.12	---	---
	2,852,880	\$ 12.84	7.57	1,423,935	\$ 6.64

The following table presents activity for options under the Director Plans:

Year Ended December 31,	2000		1999		1998	
	<i>Options</i>	<i>Weighted Average Exercise Price</i>	<i>Options</i>	<i>Weighted Average Exercise Price</i>	<i>Options</i>	<i>Weighted Average Exercise Price</i>
Outstanding — beginning of period	100,368	\$ 10.95	34,368	\$ 4.81	30,748	\$ 4.43
Granted	24,000	44.88	66,000	14.15	3,620	8.00
Exercised	(25,092)	10.95	---	---	---	---
Outstanding — end of period	99,276	\$ 19.15	100,368	\$ 10.95	34,368	\$ 4.81
Exercisable at end of period	75,276	\$ 10.95	76,368	\$ 9.86	26,228	\$ 4.43

The following table summarizes information with respect to options outstanding and exercisable under the Director Plans at December 31, 2000:

	Options Outstanding			Options Exercisable	
	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)	Number of Shares	Weighted Average Exercise Price
\$4.43 - \$8.00	25,776	\$ 4.87	5.85	25,776	\$ 4.81
\$14.00 - \$14.40	49,500	\$14.15	8.20	49,500	\$14.15
\$44.875	24,000	\$44.88	9.38	---	---
	99,276	\$19.15	7.87	75,276	\$10.95

The Company has adopted the disclosure-only provisions of Statement of Financial Accounting Standards No. 123 (SFAS No. 123), "Accounting for Stock-Based Compensation." The Company has chosen to continue to account for stock-based compensation using the intrinsic value method prescribed in Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" and related interpretations. The Company is required to disclose pro forma net income and net income per common share amounts had compensation cost for the Company's stock based compensation plans been determined based on the fair value at the grant date for awards under the plans. Had compensation expense for the stock based compensation plans been consistent with the method of SFAS No. 123, the amounts reported for 2000 would have been:

Year Ended December 31,	2000		1999	
	As Reported	Pro forma for SFAS No.123	As Reported	Pro forma for SFAS No.123
Historical net income	\$46,234	\$42,946	\$24,037	\$23,098
Historical net income per share:				
Basic	\$ 1.84	\$ 1.71	\$ 1.05	\$ 1.01
Diluted	\$ 1.76	\$ 1.63	\$ 1.00	\$ 0.96
Pro forma net income			\$18,412	\$17,559
Pro forma net income per share:				
Basic			\$ 0.81	\$ 0.77
Diluted			\$ 0.77	\$ 0.74

The weighted average fair value of options at the date of grant was estimated using the Black-Scholes model and was \$22.74 with the following assumptions in 2000: expected life of 5 years, weighted average interest rate of 6.37%, expected volatility of 88%, and no dividend yield. In 1999, the weighted average fair value of options at the date of grant was \$9.54, with the following assumptions: expected life of 5 years, weighted average interest rate of 5.49%, expected volatility of 64%, and no dividend yield. Had the fair value based method prescribed in SFAS No. 123 been used to account for stock-based compensation cost in 1998, there would have been no change in net income and net income per share from that reported based on the following assumptions: dividend yield of 8%, interest rate of 5.44% and an expected life of 8 years.

The fair value of purchase rights granted in 2000 and 1999 under the Purchase Plan was \$7.64 and \$5.11, respectively. The fair value of the employees' purchase rights was estimated using the Black-Scholes model with the following assumptions in 2000: expected life of 6 months, interest rate of



5.57%, expected volatility of 88%, and no dividend yield, and the following assumptions in 1999: expected life of 6 months, interest rate of 4.87%, expected volatility of 64%, and no dividend yield.

*Accumulated Other Comprehensive Income.* The balance of accumulated other comprehensive income was comprised of the following:

	<i>Cumulative Translation Adjustments</i>	<i>Unrealized Gain on Investments</i>	<i>Financial Instruments Designated as Cash Flow Hedges</i>	<i>Accumulated Other Comprehensive Income</i>
Balance at December 31, 1998	\$1,875	\$ 311	---	\$2,186
Non-recurring deferred tax charge	(497)	(163)	---	(660)
Foreign currency translation adjustment, net of taxes of \$(55)	(80)	---	---	(80)
Unrealized gain on investments, net of taxes of \$377	---	815	---	815
Changes in value of financial instruments designated as cash flow hedges, net of taxes of \$(232)	---	---	(228)	(228)
Balance at December 31, 1999	\$1,298	\$ 963	\$ (228)	\$2,033
Foreign currency translation adjustment, net of taxes of \$(464)	(765)			(765)
Unrealized gain on investments, net of taxes of \$(421)		(649)		(649)
Changes in value of financial instruments designated as cash flow hedges, net of taxes of \$379			603	603
Balance at December 31, 2000	\$ 533	\$ 314	\$ 375	\$1,222

#### 9) Income Taxes.

Prior to its initial public offering in 1999, the Company was treated as an S corporation for federal income tax purposes. As an S corporation, the Company was not subject to federal, and certain state, income taxes. The Company terminated its S corporation status upon the closing of its initial public offering in 1999 and became subject to taxes at C corporation tax rates. This change in tax status and tax rates resulted in a non-recurring, non-cash deferred tax credit to net income of \$3,770,000 and a deferred tax charge to other comprehensive income of \$660,000 in 1999.

The Pre-IPO stockholders are liable for individual Federal, and certain state, income taxes on their allocated portions of the Company's taxable income as an S corporation. For the tax year ending December 31, 1999, the Pre-IPO stockholders were allocated a portion of the Company's 1999 taxable income. A reconciliation of the Company's 2000 and 1999 effective tax rate to the U.S. federal statutory rate follows:

	2000	1999
U.S. Federal income tax statutory rate	35.0%	35.0%
Non-recurring deferred tax credit	---	(12.8)
Pre-IPO stockholder 1999 allocated taxable income	---	(6.8)
State income taxes, net of federal benefit	3.2	2.5
Effect of foreign operations taxed at various rates	0.9	2.1
Foreign sales corporation tax benefit	(1.6)	(1.6)
Other	---	(0.5)
	<u>37.5%</u>	<u>17.9%</u>

As the Company was not subject to Federal income taxes in 1998, a reconciliation of the effective tax rate to the Federal statutory rate is not meaningful for that year.

The components of income before income taxes and the historical related provision for income taxes consist of the following:

Year Ended December 31,	2000	1999	1998
Income before income taxes:			
United States	\$65,493	\$25,590	\$6,169
Foreign	8,456	3,678	1,966
	<u>73,949</u>	<u>29,268</u>	<u>8,135</u>
Current taxes:			
United States Federal	23,230	6,269	---
State	3,925	1,192	197
Foreign	3,697	1,806	784
	<u>30,852</u>	<u>9,267</u>	<u>981</u>
Deferred taxes:			
United States Federal	(2,930)	(4,025)	---
State	(207)	(27)	(39)
Foreign	---	16	7
	<u>(3,137)</u>	<u>(4,036)</u>	<u>(32)</u>
Provision for income taxes	<u>\$27,715</u>	<u>\$ 5,231</u>	<u>\$ 949</u>

At December 31, 2000 and 1999 the components of the deferred tax asset and deferred tax liability were as follows:

	2000	1999
Deferred tax assets (liabilities):		
Inventories	\$2,186	\$1,434
Intercompany profits	2,572	1,362
Depreciable assets	911	746
Compensation	921	362
Investment booked under the equity method	(753)	(557)
Other	(7)	250
Total	<u>\$5,830</u>	<u>\$3,597</u>

#### 10) Employee Benefit Plans.

The Company has a 401(k) profit-sharing plan for U.S. employees meeting certain requirements in which eligible employees may contribute from 1% up to 12% of their compensation. The Company, at its discretion, may provide a matching contribution which will generally match up to the first 2% of each participant's compensation, plus 25% of the next 4% of compensation. At the discretion of the Board of Directors, the Company may also make additional contributions for the benefit of all eligible employees. The Company's contributions are generally paid annually, and were \$2,285,000 and \$1,182,000 for the years ended December 31, 1999 and 1998. Approximately \$2,980,000 has been accrued as the estimated Company contribution for the year ended December 31, 2000 and is included in accrued compensation.

The Company maintains a bonus plan which provides cash awards to key employees, at the discretion of the Compensation Committee of the Board of Directors, based upon operating results and employee performance. Bonus expense to key employees was \$5,085,000, \$3,213,000, and none for the years ended December 31, 2000, 1999 and 1998, respectively.

### 11) Geographic Financial Information and Significant Customer.

See Note 1 for a brief description of the Company's business. The Company is organized around three similar product lines domestically and by geographic locations internationally and has three reportable segments: North America, Far East, and Europe. Net sales to unaffiliated customers are based on the location in which the sale originated. Transfers between geographic areas are at negotiated transfer prices and have been eliminated from consolidated net sales. Income from operations consists of total net sales less operating expenses and does not include either interest income, interest expense or income taxes. The Company had one customer comprising 25%, 22% and 16% of net sales for the years ended December 31, 2000, 1999 and 1998, respectively. This data is presented in accordance with SFAS 131, "Disclosures About Segments of an Enterprise and Related Information."

Year Ended December 31, 2000	North America	Far East	Europe	Total
Net sales to unaffiliated customers	\$230,839	\$66,903	\$29,213	\$326,955
Intersegment net sales	65,743	1,323	1,249	68,315
Depreciation and amortization	9,892	226	406	10,524
Income from operations	64,315	4,770	3,094	72,179
Segment assets	210,154	39,436	16,793	266,383
Long-lived assets	70,723	5,703	3,997	80,423
Capital expenditures	10,217	154	625	10,996

Year Ended December 31, 1999	North America	Far East	Europe	Total
Net sales to unaffiliated customers	\$128,562	\$38,734	\$19,787	\$187,083
Intersegment net sales	36,884	706	986	38,576
Depreciation and amortization	5,543	252	414	6,209
Income from operations	24,608	1,413	1,590	27,611
Segment assets	132,971	31,272	10,362	174,605
Long-lived assets	29,656	6,524	2,575	38,755
Capital expenditures	5,013	241	251	5,505

Year Ended December 31, 1998	North America	Far East	Europe	Total
Net sales to unaffiliated customers	\$95,607	\$23,902	\$20,254	\$139,763
Intersegment net sales	26,657	290	1,015	27,962
Depreciation and amortization	5,627	210	405	6,242
Income from operations	6,319	1,298	1,518	9,135
Segment assets	65,560	20,768	9,904	96,232
Long-lived assets	28,960	5,655	3,084	37,699
Capital expenditures	2,635	179	323	3,137

Included in North America are the United States and Canada. Net sales to unaffiliated customers from the United States were \$230,839,000, \$128,560,000 and \$94,449,000 for the years ended December 31, 2000, 1999 and 1998, respectively. Long-lived assets within the United States amounted to \$70,723,000, \$28,729,000 and \$28,902,000 at December 31, 2000, 1999 and 1998, respectively.

Included in the Far East are Japan, Korea, Singapore and Taiwan. Included in Europe are Germany, France and the United Kingdom. Net sales to unaffiliated customers from Japan were \$50,187,000, \$30,696,000 and \$21,153,000 for the years ended December 31, 2000, 1999 and 1998, respectively. Long-lived assets within Japan amounted to \$5,460,000, \$6,266,000 and \$5,431,000 at December 31, 2000, 1999 and 1998, respectively.

## 12) Acquisitions.

MKS completed several acquisitions in fiscal 2000, all of which have been accounted for under the purchase method of accounting. Accordingly, the results of operations for each acquired company have been included in the MKS consolidated results of operations from the date of purchase. On March 10, 2000 the Company acquired Compact Instrument Technology, LLC ("Compact Instrument"), a start-up company with proprietary technology in process monitoring for semiconductor manufacturing and other manufacturing processes. The acquisition has been accounted for by the purchase method of accounting. The purchase price was \$8,700,000 and consisted of \$8,400,000 in MKS common stock and \$300,000 in assumed net liabilities. The purchase price was allocated to the assets acquired based upon their estimated fair values. This allocation resulted in goodwill of \$7,600,000 and acquired technology of \$1,600,000, which are being amortized on a straight-line basis over 5 years and 3 years, respectively.

On May 5, 2000 the Company acquired Telvac Engineering, Ltd., a UK-based, privately held manufacturer of vacuum subsystems. The acquisition has been accounted for by the purchase method of accounting. The purchase price was \$1,600,000, and consisted of \$750,000 in cash, \$750,000 in debt and \$100,000 in other acquisition expenses. The purchase price was allocated to the assets acquired based on their estimated fair values. This allocation resulted in goodwill of \$800,000, which is being amortized on a straight-line basis over 5 years.

On July 21, 2000 the Company acquired Spectra International, LLC, a privately held company with products and technology in process monitoring. The purchase price consisted of \$9,700,000 cash; 183,293 shares of MKS common stock valued at \$6,500,000; fully vested options to purchase 83,675 shares of MKS common stock valued at \$2,400,000, calculated at an exchange ratio of 0.4768 shares of MKS common stock per share of Spectra common stock; and \$400,000 in acquisition costs. The transaction also includes contingent earnout payments of up to an aggregate of \$12,000,000 over 5 years, which will be treated as compensation expense as it is earned. The purchase price was allocated to the assets acquired based on their estimated fair values. Goodwill, acquired technology and other intangible assets are being amortized on a straight-line basis over 5 to 7 years. The allocation of the purchase price is as follows:

Current assets	\$ 5,400
Acquired intangibles	7,900
Acquired technology	3,700
Goodwill	6,100
Other assets	400
Liabilities and debt assumed	<u>(4,500)</u>
	\$19,000

The intangible assets include approximately \$0.3 million for acquired in-process technology for projects that did not have future alternative uses. This allocation represents the estimated fair value based on risk-adjusted cash flows related to the in-process technology projects. At the date of the acquisition, the development of these projects had not yet reached technological feasibility, and the technology in progress had no alternative future uses. Accordingly, these costs were expensed in the three months ended September 30, 2000.

On September 6, 2000 the Company acquired D.I.P., Inc., a privately held company with products and technology in digital process control. The purchase price was \$6,900,000 cash; 231,392 shares of

MKS common stock valued at \$6,800,000; and \$300,000 in acquisition costs. The purchase price was allocated to the assets acquired based on their estimated fair values. Goodwill, acquired technology and other intangibles are being amortized on a straight-line basis over 3 to 5 years. The allocation of the purchase is as follows:

Current assets	\$ 3,000
Acquired intangibles	1,700
Acquired technology	7,200
Goodwill	4,300
Other assets	200
Liabilities assumed	<u>(2,400)</u>
	\$14,000

The following unaudited pro forma information presents a summary of the historical results of operations of the Company as if the acquisitions had occurred at the beginning of each year.

Year Ended December 31	2000	1999
Net sales	\$339,474	\$205,508
Net income	<u>\$ 43,979</u>	<u>\$ 19,248</u>
Net income per share:		
Basic	\$ 1.69	\$ 0.82
Diluted	<u>\$ 1.65</u>	<u>\$ 0.79</u>

These unaudited pro forma results have been prepared for comparative purposes only and do not purport to be indicative of the results of operations which actually would have resulted had the acquisitions occurred at the beginning of the period, or which may result in the future.

### 13) Intangible Assets.

Intangible assets include the following at December 31, 2000:

(in thousands)	2000	Useful Lives
Patents, Proprietary technology and other acquired intangibles	\$21,912	3 – 7 years
Goodwill	<u>18,784</u>	5 – 7 years
	\$40,696	
Less: accumulated amortization	<u>(3,987)</u>	
	\$36,709	

### 14) Subsequent Event.

On January 26, 2001 the Company closed its acquisition of Applied Science and Technology, Inc. (ASTeX), a Wilmington, Massachusetts based company that designs, develops, and manufactures precision reactive gas solutions.

Under the terms of the agreement, each outstanding share of ASTeX common stock was exchanged for 0.7669 newly issued shares of common stock of MKS, resulting in the issuance of approximately 11.2 million shares of common stock of MKS, representing approximately 30% of MKS's then outstanding shares. This acquisition will be accounted for under the pooling of interests method of accounting.

## Corporate Information

### *Board of Directors*

John R. Bertucci, Chairman and Chief Executive Officer,  
MKS Instruments, Inc.

Richard S. Chute, Esquire, Hill & Barlow,  
a Professional Corporation

Owen W. Robbins, Executive Vice President (retired),  
Teradyne, Inc.

Robert J. Therrien, President and Chief Executive Officer,  
Brooks Automation, Inc.

Louis P. Valente, Chairman and Chief Executive Officer,  
Palomar Medical Technologies, Inc.

Robert R. Anderson, Chairman and Chief Executive Officer,  
Yield Dynamics, Inc. (retired)

Hans-Jochen Kahl, Managing Director, Leybold AG (retired)

### *Management*

John R. Bertucci, Chairman and Chief Executive Officer

Dr. Peter R. Younger, President and Chief Operating Officer

Ronald C. Weigner, Vice President and Chief Financial Officer

William P. Donlan, Vice President, Treasurer and Corporate  
Controller

Paul Blackborow, Vice President, Corporate Marketing

Richard Post, Vice President, Business Development

William D. Stewart, Vice President and General Manager,  
HPS Products

Robert L. Klimm, Vice President and General Manager,  
Materials Delivery and Analysis Products

F. Thomas McNabb, Vice President and General Manager,  
Pressure Measurement and Control Products

John E. Ross, Vice President and General Manager,  
ASTeX Products

Leo Berlinghieri, Vice President, Global Sales and Service

Gerald G. Colella, Vice President, Global Business Operations

Donald K. Smith, Vice President and Chief Technical Officer

George E. Manning, Vice President, Global Human Resources

Richard J. Arndt, Director of Acquisition Integration

### *Business Operations*

MKS Instruments, Inc.  
Pressure Measurement and Control Products  
Andover, Massachusetts

MKS Instruments, Inc.  
Materials Delivery and Analysis Products  
Methuen, Massachusetts

MKS Instruments, Inc.  
ASTeX Products  
Wilmington, Massachusetts  
Colorado Springs, Colorado  
Berlin, Germany

MKS Instruments, Inc.  
Advanced Technology Group  
Woburn, Massachusetts

MKS Instruments, Inc.  
HPS Products, Boulder, Colorado

MKS Instruments, Inc.  
Austin, Texas  
Richardson, Texas

MKS Instruments, Inc.  
Santa Clara, California

MKS Instruments, Inc.  
D.I.P. Products, Riverside, California

MKS Instruments, Inc.  
Spectra Products  
Morgan Hill, California  
Crewe, England

MKS Instruments France s.a.  
Le Bourget, France

MKS Instruments Deutschland GmbH  
Munich, Germany

MKS Instruments Benelux  
Delft, The Netherlands

MKS Instruments, U.K. Ltd.  
Altricham, England  
Livingston, Scotland  
Kildare, Republic of Ireland

MKS Instruments, Inc.  
Telvac Engineering, Telford, England

MKS Japan, Inc.  
Tokyo, Japan

MKS Korea Co., Ltd.  
Seoul, Korea

MKS Instruments, Inc. Singapore  
Singapore

MKS Instruments, Inc. Taiwan  
Hsinchu, Taiwan

### *Shareholder Information*

Stock Listing: NASDAQ National Market, Symbol: MKSI

### *Transfer Agent and Registrar*

EquiServe, Canton, Massachusetts

### *Independent Auditors*

PricewaterhouseCoopers LLP, Boston, Massachusetts

### *Outside Counsel*

Hale and Dorr, LLP, Boston, Massachusetts  
Hill & Barlow, a Professional Corporation, Boston, Massachusetts

### *Inquiries Concerning the Company*

Stockholder inquiries or requests for copies of this report, the annual Form 10-K, or other financial information about MKS Instruments may be addressed to Ronald C. Weigner, Vice President and Chief Financial Officer, Six Shattuck Road, Andover, MA 01810; or inquiries may be sent through the MKS website at: [www.mksinst.com](http://www.mksinst.com).

### *Annual Meeting*

The Company's 2001 Annual Meeting of the shareholders will be held at 10:00 A.M. on May 16, 2001 at the Andover Country Club, 60 Canterbury Street, Andover, Massachusetts 01810.

