TERADYNE INC
Form 10-K405
March 29, 2002

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

FORM 10-K

(MARK ONE)

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

For the fiscal year ended December 31, 2001

OR

[_] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number 1-6462

TERADYNE, INC.
(Exact name of registrant as specified in its charter)

MASSACHUSETTS (State or other jurisdiction of incorporation or organization)	04-2272148 (I.R.S. Employer Identification Number)
321 HARRISON AVENUE, BOSTON, MASSACHUSETTS (Address of principal executive offices)	02118 (Zip Code)

Registrant's telephone number, including area code: (617) 482-2700

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

Title of each class	Name of each exchange on which registered
Common Stock, par value $0.125 per share	New York Stock Exchange
Common Stock Purchase Rights	New York Stock Exchange

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained to the best of the registrant's knowledge, in definitive proxy or information

statements incorporated by reference in Part III of this Form 10-K or in any amendment to this Form 10-K. [X]

The aggregate market value of the voting stock held by nonaffiliates of the registrant as of February 24, 2002 was $5.4 billion based upon the composite closing price of the registrant's Common Stock on the New York Stock Exchange on that date.

The number of shares outstanding of the registrant's only class of Common Stock as of February 24, 2002 was 182,358,506 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement in connection with its 2002 annual meeting of shareholders are incorporated by reference into Part III.

TERADYNE, INC.

FORM 10-K

PART I

Item 1: Business

Teradyne, Inc. is the world's largest supplier of automatic test equipment and is also a leading provider of high performance interconnection systems and electronic manufacturing services.

Teradyne's automatic test equipment products include systems that:

- test semiconductors ("Semiconductor Test Systems");
- test and inspect circuit-boards ("Circuit Board Test and Inspection Systems"); and
- test high speed voice and data communication ("Broadband Test Systems").

Teradyne's interconnection systems products and services ("Connection Systems") include:

- high bandwidth backplane assemblies and associated connectors used in electronic systems; and
- electronic manufacturing services of assemblies that include Teradyne backplanes and connectors.

On October 26, 2001 Teradyne completed its acquisition of GenRad, Inc. of Westford, MA, a leading manufacturer of automatic test equipment, related software and diagnostic solutions. GenRad's business has been made part of the Circuit Board Test and Inspection Systems operating segment. GenRad activity is reflected in Teradyne's results of operations since the acquisition date. See "Note F: Acquisitions and Divestitures" and "Note S: Operating Segment and Geographic Information" in Notes to Consolidated Financial Statements for further information.

Broadband Test Systems, Diagnostic Solutions, and, prior to 2001, Software Test Systems have been combined into "Other Test Systems" for purposes of reporting Teradyne's operating segments. For financial information concerning Teradyne's operating segments, see "Note S: Operating Segment and Geographic Information" in Notes to Consolidated Financial Statements.

Statements in this Annual Report on Form 10-K which are not historical facts, so called "forward looking statements," are made pursuant to the safe

harbor provisions of the Private Securities Litigation Reform Act of 1995. Investors are cautioned that all forward looking statements involve risks and uncertainties, including those detailed in Teradyne's filings with the Securities and Exchange Commission. See also "Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations--Certain Factors That May Affect Future Results" and "Note E: Risks and Uncertainties" in Notes to Consolidated Financial Statements.

Products

Semiconductor Test Solutions

Semiconductor Test Systems produced by Teradyne are used by electronic component manufacturers in the design and testing of a wide variety of semiconductor devices, including logic, memory, mixed signal, and "system on a chip" integrated circuits. Semiconductor Test Systems are sold to semiconductor manufacturers, often referred to as "Integrated Device Manufacturers," and subcontractors to the semiconductor industry who may perform design and/or manufacturing functions, often referred to as "Fabless/Subcons." Customers use Teradyne's Semiconductor Test Systems to:

- measure product performance;
- control and improve product quality;
- improve device design;
- reduce time to market;
- enhance manufacturability;

- minimize labor costs; and
- increase production yields,

with the overall benefit of comprehensively testing advanced performance devices while reducing total costs associated with testing.

The semiconductor test market is comprised of two sub-markets. The first sub-market is memory device testing, which includes the testing of dynamic random access memory ("DRAMs") of all types (synchronous, double data rate ("DDR") and Rambus(TM)), static random access memory ("SRAMs") and flash memory. The second sub-market is non-memory device testing, which includes the testing of analog, mixed-signal and system-on-a-chip devices, high performance logic devices and logic devices produced in high volumes.

Teradyne products within the Semiconductor Test Systems market include:

Memory Test Solutions

Reducing cost of test is especially crucial in the highly price sensitive memory device market. Wafer probing, or contacting the silicon die to test it prior to packaging, has become an increasingly popular means to increase yield and reduce test costs. Teradyne's Probe-One memory test system delivers one of the shortest possible test times per wafer and one of the lowest test costs. The Probe-One's Flex-Die(TM) architecture delivers the ability to test multiple memory arrays in parallel, further increasing test productivity and reducing test cost. The Probe-One was introduced in 2001. The testing of packaged memory devices remains an important market, as well. Teradyne's J996 memory test system provides high throughput package test solutions for next generation memory devices. The J996 has the accuracy and waveform fidelity to test 250 MegaHertz devices, and is able to test sixty-four 16 Input/Output devices in parallel with a minimal amount of floor space. Teradyne's Aires test system is

designed for newest-generation memory devices such as DDR, Direct Rambus(TM) DRAMs and fast SSRAMs. Accurately delivering the high speed, complex patterns required for characterization of these emerging devices, Aires' FlexSystem architecture combines full function memory and logic pattern generators with a per-pin timing system.

System-on-a-Chip / Mixed Signal / Analog Test Solutions

Semiconductor devices that employ both analog and digital circuits are referred to as "mixed-signal devices." Recent mixed-signal devices called "system on chip," such as those employed in consumer electronics and wireless communication products, include significantly increased functionality compared to earlier mixed-signal devices. The introduction of Teradyne's Catalyst test systems in 1996 began the system-on-a-chip test revolution, providing a single, integrated test environment for system-on-a-chip testing. Teradyne's Catalyst Tiger test system, introduced in 2000, extends component and functional test capability to very high device operating speeds. Catalyst and Catalyst Tiger test systems reduce time to market and cost to test across the customer spectrum, from Integrated Device Manufacturers to Fabless/Subcons. With a market share nearly double its nearest competitor, a majority of people who use a personal computer, surf the Internet, or watch a DVD, are using a product whose semiconductor device was tested with the Catalyst test systems. Teradyne also estimates that 75% of the world's cell phones include devices tested on Teradyne system-on-a-chip / mixed-signal test systems. As of December 31, 2001, more than 1,000 Catalyst test systems have been shipped to customers worldwide. Teradyne's predecessor to the Catalyst test systems, the A5 test systems of advanced mixed-signal test systems has a worldwide installed base of more than 1,000 systems and covers a wide range of device applications, including automotive and telecommunications.

High Performance Test Solutions

High performance devices such as microprocessors require high performance automatic test equipment for both functional ("Does it function properly?") and structural ("Is it constructed properly?") testing. Very Large Scale Integration ("VLSI") test systems offer solutions for the broadest range of high performance devices used in today's electronics and Internet products, such as personal computers and video game consoles, Internet routers and switches, and network servers. Almost every type of high-end microprocessor, integrated processor,

and graphic device in the world today is tested on a Teradyne high performance logic test system. Teradyne's J973EP is one of the only VLSI test systems designed for the wide range of testing capability needed for structural to functional testing in a single test system. This product's flexible configuration provides the ability to switch between functional and structural test in real time, minimizing test cost by matching test performance to device test requirements only when needed. The J973EP expands the performance curve on accuracy, precision device power, and differential bus testing.

High Volume Device Test Solutions

Devices tested in high volume, such as microcontrollers, are at the heart of almost every consumer electronics product, from small appliances to automotive engine controllers. Produced in enormous quantities where every penny matters, delivering the lowest cost of test at very high production throughput rates is essential. Teradyne's Integra test systems combine compact packaging, high performance, and ease of use into a system designed to meet the high volume /

low cost requirements of microcontroller production test. Increasing the level of integration in the system is key to reducing system cost and size. Teradyne is the first automatic test equipment vendor to combine four channels of automatic test equipment timing functionality into a single custom semiconductor device. Teradyne's design team created an innovative technique that enabled integration of a full 64 channels of test capability onto a single printed circuit board. This design approach eliminated the mainframe and interconnection cabling resulting in a complete test system housed in a compact test head-only configuration. Its "zero footprint" design reduces the total cost of ownership and allows for more efficient use of production floor space. Teradyne's Integra test systems include the J750 and J750k. Using the same compact, low cost architecture Teradyne's IP750 CCD Image Sensor test system enjoys the world's largest shipment volume and installed base in the image sensor device test market, driven by the burgeoning popularity of digital cameras and other imaging products.

Connection Systems Solutions

Connection Systems is a global supplier of high-performance components and electronic manufacturing services. Connection System's component technology can be found in such diverse products as Internet routers, computer servers, mass data storage and telecom switches. Connection Systems offers a total interconnect solution with a broad suite of technologically differentiated capabilities including printed circuit boards, high-speed, high-density connectors, multi-gigabit backplane assemblies and complete systems integration and test.

A backplane plays the crucial roll of locating and supporting printed circuit boards within a system, enabling them to "talk" to each other and to the outside world. Connection Systems produces custom, large format backplanes, up to .400 inches thick and 24 inches x 54 inches in size with up to 64 layers. Connectors are devices that allow the backplane and other printed circuit boards (sometimes called daughter cards) to plug together. High bandwidth capability packed in a small amount of space is an important technological advantage of Teradyne's connectors. Connection System's VHDM(R) and VHDM-HSD(TM) connector families have become a standard in the industry for high-speed, high-density interconnect. The GbX(TM) connector was introduced in 2001 to achieve even higher data rates and greater interconnection density. The Connection Systems organization also provides electronic manufacturing services, including backplane assembly, electro-mechanical integration of sub-assemblies, and complete systems integration and test.

An essential element of the Connection Systems business is its design and applications engineering expertise at every step in the process. This expertise helps customers balance critical cost and performance needs during system design. In addition, by providing program management services, Connection Systems becomes an extension of the customer's operation, delivering quick turn prototypes and high technology production volumes.

Circuit Board Test and Inspection Solutions

The central element of almost every electronic product is a printed circuit board. A circuit board includes all the components and their interconnections that cause the board to perform its intended functions. As more and more product functionality is packed into smaller packages, such as PDAs, phone handsets and laptop computers, both the circuit boards and their components are increasingly complex. The circuit board manufacturing process

is also complex and demands a number of inspection and test steps. Teradyne circuit board test and inspection equipment is used throughout the manufacturing process to ensure high production yields, to maintain overall product quality, to diagnose faults quickly where and when they occur, and to reduce total manufacturing cost. The Teradyne circuit board and inspection product range includes the following products:

In-Circuit Test

In-circuit test systems examine the assembled and soldered circuit board for proper construction under both power-off and power-on conditions. Faulty components or solder problems are identified quickly and precisely. Because of their relatively low cost, high throughput and diagnostic accuracy, in-circuit testers are used universally in every electronics production line. Teradyne in-circuit products support a full range of circuit board test applications, including prototype and ramp up, high-volume production, selective or sample test and final or system test. Accordingly, Teradyne offers a wide variety of capabilities and options with its Spectrum 8000-series, Z1800-series and GR TestStation product lines. Specialized systems such as the GR Pilot and Javelin "flying probers" round out one of the industry's broadest and most capable product families.

Imaging Inspection

As circuit boards become increasingly dense and complex, achieving the electrical contact required for the traditional in-circuit test method is becoming more difficult, time-consuming and expensive. "Loss of (electrical) access" is a primary driver behind the increasing popularity of imaging inspection systems, which examine the circuit board for physical qualities including correct component presence and orientation, the absence of electrical opens and solder quality. Teradyne's imaging inspection systems employ one of two technologies: automated optical inspection ("AOI"), whereby a visual image of the board is captured and analyzed; and automated x-ray inspection ("AXI"), which captures an x-ray image of the board. Each technology has particular strengths in analyzing various board defect classes. For example, AOI is the preferred technology for evaluating and diagnosing component-related defects, while AXI is the preferred technology for analyzing solder-related defects. Teradyne's Optima 7000-series AOI systems employ advanced and patented lighting, camera, software, and mechanics, resulting in highly reliable, repeatable, and accurate optical inspection at high line speeds. The AXI product line offers fast throughput with high resolution on both its two-dimensional (2D) and three-dimensional (3D) models, and is the only product line that includes a combined 2D/3D capability.

Functional Test

Functional test systems examine the circuit board to determine whether it will meet its performance specifications and whether it will properly perform its intended "function." Functional testing is typically employed at the conclusion of the manufacturing process, as the final check step, to ensure the product will work as designed. Teradyne's functional test product line encompasses a full range of functional test applications, including high-volume production, final or system test, and field or depot diagnosis and repair. Available products range from VXI and PXI open architecture instruments and systems, to fully configured platforms for a wide range of manufacturing and depot test applications. Teradyne functional test systems include focused solutions for the communications, computer, and automotive markets, addressing functional test requirements for products such as automotive engine control units, telecom/datacom infrastructure equipment, wireless handheld devices, and complex/mission critical military/aerospace products. All Teradyne functional test solutions are designed specifically for the production test environment, which helps ensure that the test system has been optimized for throughput,

reliability, and repeatability.

Design to Build Software

Electronics manufacturers employ a variety of circuit board test and inspection equipment throughout their production lines. This broad range of circuit board test and inspection choices requires extensive test planning and preparation, often referred to as "design to build" or "D2B". Teradyne's Strategist software tool enables users to model, simulate, optimize and execute a cost-effective test and inspection strategy, which optimally

divides test and inspection tasks among the imaging inspection, in-circuit and functional systems used on the manufacturing line. Once the strategy is determined, the user then employs Teradyne's Alchemist software to generate test software and documentation for the test and inspection equipment being used in the manufacturing line.

Broadband Test Solutions

Broadband Test Systems test the capacity and quality of telephone and cable television lines connected to homes and businesses. These state-of-the-art testing capabilities support cable and telephone company service provider's goals to sell and deploy broadband services sooner and improve the efficiency of qualification, provisioning, and customer care. Broadband Test Systems provide voice network maintenance solutions for the communications industry. Testing more than 120 million access lines worldwide for many of the world's largest telecommunications companies, including British Telecommunications, Deutsche Telecom and Verizon, Teradyne's 4TEL access network maintenance systems reduce operating cost and increase customer satisfaction by reliably detecting and identifying line faults within a telecommunications access network. With ten years of Internet protocol testing experience, Teradyne also provides products to telecommunications companies such as local exchange carriers for Internet testing, customer care and voice network maintenance.

Teradyne products within the Broadband Test Systems market include:

4TEL & 4TEL II Voice Test Systems

Teradyne's 4TEL voice test system precisely identifies and isolates faults within a telecommunications network, inside or outside customer premises, without the need for customer isolation equipment. The 4TEL II voice test system accurately isolates faults to such zones as exchange hardware, exchange wiring, access cable, inside premises wiring and customer equipment.

The 4TEL system quickly locates the precise geographic location of a fault, enabling service providers to dispatch craftspeople to fix a fault, rather than dispatching them to find the fault. The 4TEL voice test system also reliably identify when a dispatch is not needed, such as when the problem exists in customer-owned equipment. Teradyne's 4TEL system currently tests one seventh of the world's voice lines.

NetFlare(TM) End-to-End Internet Testing

Cable and telephone company service providers can reduce broadband service call handling time with Teradyne's NetFlare system. This newly developed technology allows the consumer or call center representative to emulate the consumer's network experience and determine the source of a problem. For example, NetFlare technology automatically measures throughput as the consumer

experiences it, determines whether the broadband service provider commitment is met, and identifies the network source of the problem. NetFlare significantly reduces average call handling time and reduces the necessity for further technical support.

Celerity(TM) Speed Provisioning and Qualification Products

Service providers need to know which cable lines between the central office and the end user are qualified for digital subscriber lines ("DSL") and which are not. Existing cable records are typically insufficient. Teradyne's Celerity product qualifies millions of lines for DSL capability in hours, and develops a database immediately showing which lines are qualified, which lines require conditioning and which lines are disqualified. Celerity performs real time testing that provides detailed loop qualification information and tests in-service DSL lines, identifying the presence and dispatch location of faults that affect data transmission. Celerity customers are able to significantly reduce costs of deployment and identify new lines and high-speed lines for increased revenue.

Diagnostic Solutions

Diagnostic Solutions is a major supplier of automotive manufacturing test and service bay diagnostic systems supporting vehicle electronics systems throughout their lifecycle, from design through manufacturing to service. Diagnostic Solutions products are used by automotive and transportation original equipment manufacturers, as well as by independent service providers.

Software Test Solutions

Software Test Systems, which Teradyne divested in December 2000, are used by a number of industries to test communications networks, computerized telecommunication systems, and web based applications.

Summary of Net Sales by Operating Segment

Teradyne's four principal operating segments accounted for the following percentage of consolidated net sales for each of last three years:

	% of consolidated net sales		
	2001	2000	1999
Semiconductor Test Systems	50%	67%	68%
Connection Systems	38	24	21
Circuit Board Test and Inspection Systems	9	5	6
Other Test Systems	3	4	5
Total	100%	100%	100%

Sales and Distribution

Teradyne's systems are extremely complex and require extensive support both by the customer and by Teradyne. Prices for Teradyne's systems can reach $3 million or more. In 2001, no single customer accounted for more than 10% of

Teradyne's consolidated net sales. In 2001, Teradyne's three largest customers accounted for 24% of consolidated net sales.

Direct sales to United States government agencies accounted for less than 1% of consolidated net sales in 2001, 2000, and 1999. Approximately 5% of Circuit Board Test and Inspection Systems sales in 2001 were to the United States government agencies. Sales were also made within each of Teradyne's segments to customers who are government contractors. Approximately 3% of Connection Systems sales and approximately 27% of Circuit Board Test and Inspection Systems sales fell into that category in 2001. On June 22, 2001, Teradyne sold its aerospace and defense connector and backplane business to Amphenol Corporation of Wallingford, Connecticut.

Teradyne has sales and service offices located throughout North America, South East Asia, Europe, Taiwan, Japan, and Korea as Teradyne's customers outside the United States are located primarily in these geographic areas. Teradyne sells in these areas predominantly through a direct sales force. Primarily all of Teradyne's manufacturing activities are conducted in the United States. Sales to customers outside the United States accounted for 49% of consolidated net sales in 2001, 54% in 2000, and 52% in 1999. Sales to customers located in Taiwan were 10% in 2001 and 2000. Sales are attributed to geographic areas based on the location of the customer site.

Teradyne is subject to the inherent risks involved in international trade, such as:

- political and economic instability and acts of terrorism;
- restrictive trade policies;
- controls on funds transfer;
- currency fluctuations;
- difficulties in managing distributors;
- potentially adverse tax consequences; and
- the possibility of difficulty in accounts receivable collection.

Teradyne attempts to reduce the effects of currency fluctuations by hedging those currency exposures associated with certain assets and liabilities denominated in non-functional currencies and by conducting some of its international transactions in U.S. dollars or dollar equivalents. See also "Item 7A. Quantitative and Qualitative Disclosures About Market Risks" and "Note G: Financial Instruments" in Notes to Consolidated Financial Statements.

Competition

Teradyne faces substantial competition, throughout the world in each of its operating segments. Some of these competitors have substantial financial and other resources to pursue engineering, manufacturing, marketing and distribution of their products. Teradyne also faces competition from internal suppliers at several of its customers. Some of Teradyne's competitors have introduced or announced new products with certain performance characteristics that may be considered equal or superior to those Teradyne currently offers. Teradyne expects its competitors to continue to improve the performance of their current products and to introduce new products or new technologies that provide improved cost of ownership and performance characteristics. New product introductions by competitors could cause a decline in sales or loss of market acceptance of Teradyne's products. Moreover, increased competitive pressure could lead to intensified price based competition, which could materially adversely affect Teradyne's business, financial condition and results of operations.

Backlog

At December 31, 2001 and 2000, Teradyne's backlog of unfilled orders in each of its four principal operating segments was as follows:

	(in millions)	
	2001	2000
Semiconductor Test Systems	$317.2	$ 742.1
Connection Systems	357.6	534.4
Circuit Board Test and Inspection Systems	55.5	68.4
Other Test Systems	32.7	37.2
	$763.0	$1,382.1

Of the backlog at December 31, 2001, approximately 97% of the Semiconductor Test Systems backlog, 100% of the Connection Systems backlog, 92% of Circuit Board Test and Inspection Systems backlog, and 59% of the Other Test Systems backlog is expected to be delivered in 2002. Teradyne's experience indicates that a portion of orders included in the backlog may be canceled or rescheduled. During 2001, Teradyne experienced an increase in the rescheduling of delivery dates by some of its customers, and thus the timing of the delivery of a significant portion of Teradyne's backlog is uncertain. In 2001, Teradyne experienced cancellations of $285.5 million. Teradyne may experience additional cancellations in the future. There are no seasonal factors related to the backlog.

Raw Materials

Teradyne's products require a wide variety of electronic and mechanical components. Teradyne can experience occasional delays in obtaining timely delivery of certain items. Additionally, Teradyne could experience a temporary adverse impact if any of its sole source suppliers ceased to deliver products. Any prolonged inability to obtain adequate supplies, or any other circumstances that would require Teradyne to seek alternative sources of supply could have a material adverse effect on its business, financial condition, and results of operations.

Patents and Licenses

Teradyne's development of its products, both hardware and software, is largely based on proprietary information. Teradyne protects its rights in proprietary information through various methods such as:

- copyrights;
- trademarks;
- patents and patent applications;
- software license agreements; and
- employee agreements.

Any invalidation of Teradyne's intellectual property rights could have a material adverse effect on its business.

Employees

As of December 31, 2001, Teradyne employed approximately 8,400 people. Since the inception of Teradyne's business, there have been no work stoppages or other labor disturbances. Teradyne has no collective bargaining contracts.

Engineering and Development Activities

The highly technical nature of Teradyne's products requires a large and continuing engineering and development effort. Engineering and development expenditures were approximately $288.7 million in 2001, $348.0 million in 2000, and $261.9 million in 1999. These expenditures amounted to approximately 20% of consolidated net sales in 2001, 11% in 2000, and 15% in 1999.

Environmental Affairs

Teradyne's manufacturing facilities are subject to numerous laws and regulations designed to protect the environment, particularly from manufacturing plant wastes and emissions. These laws include:

- The Comprehensive Environmental Response, Compensation, and Liability Act;
- The Superfund Amendment and Reauthorization Act of 1986;
- The Occupational Safety and Health Act;
- The Clean Air Act;
- The Clean Water Act;
- The Resource Conservation and Recovery Act of 1976; and
- The Hazardous and Solid Waste Amendments of 1984.

In the opinion of management, the costs associated with complying with these laws and regulations have not had and are currently not expected to have a material effect upon the financial position or results of operations of Teradyne.

In 2001, Teradyne was designated as a "potentially responsible party" ("PRP") at two clean-up sites, one in California and one in Rhode Island. Teradyne does not believe that it has any liability for the cleanup of the California site, and has requested the state of California to remove Teradyne's name from the list of PRPs, however, Teradyne has not yet received a reply. In the opinion of management, the costs associated with complying with the clean-up of this site, if required, are not expected to have a material effect upon the financial position or results of operations of Teradyne. However, Teradyne cannot predict what its liability, if any, may be for the clean-up of this site and can give no assurance that it will not materially adversely affect Teradyne's financial condition or results of operations. With respect to the second site, in Rhode Island, additional information is currently being collected to better understand Teradyne's financial obligations, if any, for its portion of the clean-up of this site.

EXECUTIVE OFFICERS OF THE COMPANY

The following table sets forth the names of all executive officers of Teradyne and certain other information relating to their positions held with Teradyne and other business experience. Executive officers of Teradyne do not have a specific term of office but rather serve at the discretion of the Board of Directors.

Executive Officer	Age	Position	Business Experience For The Past 5 Years
George W. Chamillard	63	President, Chairman of the Board, and Chief Executive Officer	Chairman of the Board since 2000; President and Chief Executive Officer of Teradyne since 1997; Director of Teradyne since 1996; President and Chief Operating Officer of Teradyne from 1996 to 1997; Executive Vice President of Teradyne from 1994 to 1996.
Gregory R. Beecher..	44	Vice President and Chief Financial Officer	Vice President and Chief Financial Officer of Teradyne since 2001; Partner at PricewaterhouseCoopers LLP from 1993 to 2001.
Edward Rogas, Jr....	61	Senior Vice President	Senior Vice President of Teradyne since 2000; Vice President of Teradyne from 1984 to 1999.
David L. Sulman*....	58	Senior Vice President	Senior Vice President of Teradyne from 2000 to 2001; Vice President of Teradyne from 1994 to 1999.
Thomas S. Grilk.....	54	Vice President and General Counsel	Vice President and General Counsel of Teradyne since 2000; VP of Government Affairs and Assistant General Counsel at Compaq Computer Corp and Digital Equipment Corp from 1994 to 2000.
Michael A. Bradley..	53	President of Semiconductor Test	President of Semiconductor Test since 2001; Vice President of Teradyne from 1992 to 2001; Chief Financial Officer of Teradyne from 1999 to 2001.
John M. Casey.....	53	President of Circuit Board Test and Inspection	President of Circuit Board Test and Inspectio since 2002; Vice President of Teradyne since 1990.
Richard E. Schneider	44	President of Connection Systems	President of Connection Systems since 2001; Vice President of Teradyne from 1998 to 2001; Connections Systems manager from 1998 to 2001; Connection Systems Business Development manager from 1997 to 1998.
G. Richard MacDonald	53	Controller	Controller of Teradyne since 2001; Controller of Teradyne's Industrial Consumer Division from 1989 to 2001.
Stuart M. Osattin...	56	Vice President and Treasurer	Vice President and Treasurer of Teradyne since 1994.

*Mr. Sulman retired from Teradyne on December 31, 2001.

Item 2: Properties

Teradyne's executive offices are in Boston, Massachusetts. Manufacturing and other operations are carried on in several locations. The following table provides certain information as to Teradyne's principal general offices and manufacturing facilities.

Approximate
Square Feet

Location	Operating Segment	Property Interest	of Floor Space
Boston, Massachusetts.....	Semiconductor Test & General Offices	Own	492,000
Agoura Hills, California.....	Semiconductor Test	Own	572,000
Nashua, New Hampshire.....	Connection Systems	Own	569,000
North Reading, Massachusetts.	Semiconductor Test & Circuit Board Test and Inspection	Own	273,000
North Reading, Massachusetts.	Unoccupied	Own	425,000*
Westford, Massachusetts.....	Circuit Board Test and Inspection	Lease	230,000
Woburn, Massachusetts.....	Semiconductor Test	Lease	205,000
San Diego, California.....	Connection Systems	Own	192,000
Hudson, New Hampshire.....	Connection Systems	Lease	144,000
San Jose, California.....	Semiconductor Test	Own	120,000
Stoughton, Massachusetts.....	Unoccupied	Own	120,000*
Mexicali, Mexico.....	Connection Systems	Lease	112,000
La Verne, California.....	Connection Systems	Own	93,000
Shanghai, China.....	Unoccupied	Lease	87,000*
Manchester, England.....	Diagnostic Solutions	Lease	75,000
Kumamoto, Japan.....	Semiconductor Test	Own	66,000
Deerfield, Illinois.....	Broadband Test	Own	63,000
Walnut Creek, California.....	Circuit Board Test and Inspection	Lease	60,000
Plano, Texas.....	Connection Systems	Lease	50,000
Dublin, Ireland.....	Connection Systems	Lease	46,000
Fremont, California.....	Connection Systems	Lease	46,000

*This space is unoccupied and therefore available for future expansion.

Item 3: Legal Proceedings

In connection with the August 2000 acquisition of each of Herco Technology Corp., a California company, and Perception Laminates, Inc., a California company, a complaint was filed by the former owners of those companies on or about September 5, 2001 naming as defendants Teradyne and two of its executive officers. The case was originally filed in the Superior Court in San Diego County, California, and was subsequently removed by the defendants to federal court. On or about November 14, 2001, Teradyne and the two individual defendants filed a motion to dismiss the amended complaint in its entirety. The federal court granted in part and denied in part that motion to dismiss. The claims that were dismissed were dismissed with prejudice. At the federal court's request, the plaintiffs filed a second amended complaint on March 4, 2002 setting forth their remaining claims. The second amended complaint alleges, among other things, that the sale of Teradyne's common stock to the former owners violated certain California securities statutes and common law, and that Teradyne breached certain contractual obligations in the agreements relating to the acquisitions. The second amended complaint seeks unspecified damages, including compensatory, consequential and punitive damages, and recovery of reasonable attorneys' fees and costs. On March 25, 2002, Teradyne and the two individual defendants filed their answer to the second amended complaint.

Teradyne and two of its executive officers are named as defendants in three purported class action complaints that were filed in the United States District Court for the District of Massachusetts, Boston, Massachusetts, on or about October 16, 2001, October 19, 2001 and November 7, 2001. The complaints allege, among other things, that the defendants violated Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, by making, during the period from July 14, 2000 until October 17, 2000, material misrepresentations and omissions to the investing public regarding Teradyne's business operations and future prospects. The complaints seek unspecified damages, including compensatory damages and

recovery of reasonable attorneys' fees and costs.

Teradyne disputes all of the claims above and believes they are without merit, and intends to defend vigorously against the lawsuits. However, an adverse resolution of any of the lawsuits could have a material adverse effect on Teradyne's financial position or results of operations. Teradyne is not presently able to reasonably estimate potential losses, if any, related to any of the lawsuits and therefore has not accrued for any potential losses from the lawsuits.

In addition, Teradyne is subject to legal proceedings and claims that arise in the ordinary course of business. Management does not believe these actions will have a material adverse effect on Teradyne's financial position or results of operations.

Item 4: Submission of Matters to a Vote of Security Holders.

None.

PART II

Item 5: Market for Registrant's Common Equity and Related Shareholder Matters

The following table shows the market range for Teradyne's Common Stock based on reported sale prices on the New York Stock Exchange.

Period	High	Low
2001 First Quarter	$ 44.05	$29.05
Second Quarter	47.21	26.25
Third Quarter	37.45	18.43
Fourth Quarter	33.00	18.50
2000 First Quarter	$ 94.94	$54.88
Second Quarter	115.44	65.00
Third Quarter	81.00	34.94
Fourth Quarter	41.63	23.00

The number of record holders of Teradyne's Common Stock at February 22, 2002 was 891.

Teradyne has never paid cash dividends because it has been Teradyne's policy to use earnings to finance expansion and growth. Payment of future cash dividends will rest within the discretion of the Board of Directors and will depend, among other things, upon Teradyne's earnings, capital requirements, and financial condition. Teradyne presently expects to retain all of its earnings for use in the business.

Item 6: Selected Financial Data

	Years Ended December 31,*				
	2001	2000	1999	1998	1997

	(Dollars in thousands, except per share amounts)				
Net sales	$1,440,581	$3,043,946	$1,790,912	$1,489,151	$1,266,274
(Loss) income before cumulative effect of change in accounting principle	$ (202,215)	$ 517,754	$ 191,694	$ 102,117	$ 127,608
(Loss) income before cumulative effect of change in accounting principle per common share--basic	$ (1.15)	$ 2.99	$ 1.12	$ 0.61	$ 0.76
(Loss) income before cumulative effect of change in accounting principle per common share--diluted	$ (1.15)	$ 2.86	$ 1.07	$ 0.59	$ 0.74
Total assets	$2,542,391	$2,355,868	$1,568,213	$1,312,814	$1,251,674
Long-term obligations	$ 451,682	$ 8,352	$ 8,948	$ 13,200	$ 13,141

*Note: Previously published financial data prior to 2000 has not been restated to give the pro forma effect of the adoption of the provisions of SAB 101. See "Note C: Change in Accounting Principle" in Notes to Consolidated Financial Statements for further information.

Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion should be read in conjunction with the consolidated financial statements and notes thereto included elsewhere in this Annual Report on Form 10-K. In addition to the historical information contained in this document, the discussion in this Annual Report on Form 10-K contains forward-looking statements, made pursuant to the Private Securities Litigation Reform Act of 1995, that involve risks and uncertainties, such as statements of Teradyne's plans, expectations and intentions. The cautionary statements made in this Annual Report on Form 10-K should be read as being applicable to all related forward-looking statements whenever they appear in this Annual Report on Form 10-K. Teradyne's actual results could differ materially from the results contemplated by these and any other forward-looking statements. Factors that could contribute to such differences include those discussed below as well as those cautionary statements and other factors set forth in "Certain Factors That May Affect Future Results" and elsewhere herein.

Critical Accounting Policies and Estimates

Teradyne has identified the policies discussed below as critical to understanding its business and its results of operations. The impact and any associated risks related to these policies on its business operations is discussed throughout Management's Discussion and Analysis of Financial Condition and Results of Operations where such policies affect its reported and expected financial results.

The preparation of consolidated financial statements requires Teradyne to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent liabilities. On an on-going basis, Teradyne evaluates its estimates, including

those related to inventories, investments, intangible and other long-lived assets, bad debts, income taxes, pensions, warranties, contingencies and litigation. Teradyne bases its estimates on historical experience and on appropriate and customary assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Teradyne recognizes revenue when there is persuasive evidence of an arrangement, title and risk of loss have passed, delivery has occurred or the services have been rendered, the sales price is fixed or determinable and collection of the related receivable is reasonably assured. It is Teradyne's policy to require an arrangement with its customers, either in the form of a written or electronic contract or purchase order containing all of the terms and conditions governing the arrangement, prior to the recognition of revenue. Title and risk of loss generally passes to the customer at the time of delivery of the product to a common carrier. At the time of the transaction, Teradyne assesses whether the sales price is fixed or determinable based upon the payment terms of the arrangement. If a significant portion of the sales price is not due with normal payment terms, the sales price may not be deemed fixed and revenue would be recognized as the amounts become due. Teradyne does not offer a right of return on its products.

Teradyne assesses collectibility based on a number of factors, including past transaction and collection history with a customer and the credit-worthiness of the customer. Teradyne performs on-going credit evaluations of its customer's financial condition but generally does not require collateral from its customers. If Teradyne determines that collectibility of the sales price is not reasonably assured, revenue is deferred until such time as collection becomes reasonably assured, which is generally upon receipt of payment from the customer.

Revenue is recognized upon delivery provided that customer acceptance criteria can be demonstrated prior to shipment. Where the criteria cannot be demonstrated prior to shipment, or in the case of new products, revenue is deferred until acceptance has been received. For multiple element arrangements, Teradyne defers the greater of the fair value of any undelivered elements of the contract or the portion of the sales price which is not payable until the undelivered elements are delivered. Teradyne also defers the portion of the sales price that is not due until acceptance, which represents deferred profit. Fair value is the price charged when the element is sold separately. In order to recognize revenue the functionality of the undelivered element must not be essential to the delivered element. Installation is not considered essential to the functionality of the product as these services do not alter the product capabilities, do not require specialized skills or tools and can be performed by the customers or other vendors. In addition to installation, other elements may include service arrangements and undelivered products. Teradyne's products are generally subject to warranty and related costs are provided for in cost of sales when product revenue is recognized.

Interconnection systems and electronic manufacturing assembly services revenue is recognized upon shipment or delivery according to the shipping terms of the arrangement as there is no installation required and there are no contractual acceptance requirements.

For certain contracts eligible for contract accounting under Statement of Accounting Position No. 81-1, "Accounting for Performance of Construction-Type

and Certain Production-Type Contracts," revenue is recognized using the percentage-of-completion accounting method based upon an efforts-expended method. The software in these arrangements requires significant production, modification or customization. In all cases, changes to total estimated costs and anticipated losses, if any, are recognized in the period in which determined. To date revenue under contract accounting has not been material.

Inventories which include materials, labor and manufacturing overhead are stated at the lower of cost (first-in, first-out basis) or net realizable value. On a quarterly basis, Teradyne uses consistent methodologies to evaluate all inventory for net realizable value. Teradyne records a provision for excess and obsolete inventory when such an impairment is identified through the quarterly review process. Excess and obsolete inventory, consisting of on-hand and non-cancelable on-order inventory, in excess of estimated usage over the next 12 months is written down to its estimated net realizable value, if less than cost. The excess and obsolescence evaluation is based upon assumptions about future demand, product mix and possible alternative uses. In 2001, Teradyne recorded an inventory provision for excess and obsolete inventory of $139.7 million which includes a writedown for discontinued product lines of $34.5 million. If actual demand, product mix or possible alternative uses are less favorable than those projected by management, additional inventory write-downs may be required.

On a quarterly basis, Teradyne evaluates the realizability of its deferred tax assets and assesses the need for a valuation allowance. Realization of Teradyne's net deferred tax assets is dependent on its ability to generate approximately $415 million of future taxable income. Teradyne believes that it is more likely than not that its net deferred tax assets will be realized based on forecasted income, however, there can be no assurance that Teradyne will be able to meet its expectations of future income. If Teradyne continues to incur significant losses for an extended period of time, Teradyne could be required to establish a valuation allowance against all or a significant portion of its net deferred tax assets. To the extent Teradyne establishes a valuation allowance, an expense will be recorded within the provision for income taxes line in the statement of operations.

Teradyne assesses the impairment of identifiable intangibles, long-lived assets and related goodwill whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors Teradyne considers important which could indicate an impairment include significant underperformance relative to expected historical or projected future operating results, significant changes in the manner of Teradyne's use of the acquired asset or the strategy for Teradyne's overall business and significant negative industry or economic trends. When Teradyne determines that the carrying value of intangibles, long-lived assets and related goodwill may not be recoverable based upon the existence of one or more of the above indicators of impairment, Teradyne measures any impairment based on a projected discounted cash flow method using a discount rate determined by its management to be commensurate with the risk inherent in its current business model. During 2001, Teradyne recorded charges of $32.3 million related to the impairment of certain excess facilities and long-lived assets. Intangible assets, long-lived assets, and goodwill amounted to $1.1 billion as of December 31, 2001.

The volatility of the industries that Teradyne serves can cause certain of its customers to experience shortages of cash flows, which can impact their ability to make required payments. Teradyne maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. At December 31, 2001, this allowance for doubtful accounts amounted to $6.3 million. Estimated allowances for doubtful accounts are reviewed periodically taking into account the customer's current payment history, the customer's current financial statements and other information regarding the customer's credit worthiness. If the financial condition of

Teradyne's customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required.

SELECTED RELATIONSHIPS WITHIN THE CONSOLIDATED STATEMENTS OF OPERATIONS

	YEARS ENDED DECEMBER 31,		
	2001	2000	1
	(dollars in thousands)		
Net sales	$1,440,581	$3,043,946	$1,7
(Loss) income before cumulative effect of change in accounting principle	$ (202,215)	$ 517,754	$ 1
(Decrease) increase in net sales from preceding year:			
Amount	($1,603,365)	$1,253,034	$ 3
Percentage	(53)%	70 %	
(Decrease) increase in income (loss) from preceding year	$ (719,969)	$ 326,060	$
Percentage of net sales:			
Net sales	100.0 %	100.0 %	
Expenses:			
Cost of sales	70.9	52.8	
Cost of sales - inventory provision and other charges	11.1	--	
Engineering and development	20.1	11.4	
Selling and administrative	18.7	12.4	
Restructuring and other charges	3.7	--	
	124.5	76.6	
Net interest and other income	1.9	0.9	
(Loss) income before income taxes and cumulative effect of change in accounting principle	(22.6)	24.3	
(Benefit) provision for income taxes	(8.6)	7.3	
(Loss) income before cumulative effect of change in accounting principle	(14.0)	17.0	
Cumulative effect of change in accounting principle	--	(2.1)	
Net (loss) income	(14.0)%	14.9 %	

On October 26, 2001, Teradyne completed its acquisition of GenRad, Inc. of Westford, MA, a leading manufacturer of electronic automatic test equipment, related software, and diagnostic solutions. GenRad's business has been made a part of the Circuit Board Test and Inspection Systems operating segment. GenRad activity is reflected in Teradyne's results of operations since the acquisition date. See "Note F: Acquisitions and Divestitures" in Notes to Consolidated Financial Statements for further information.

Results of Operations:

2001 compared to 2000

Revenue

Teradyne's four principal operating segments accounted for the following percentages of consolidated net sales for each of last three years:

	% of consolidated net sales		
	2001	2000	1999
Semiconductor Test Systems	50%	67%	68%
Connection Systems	38	24	21
Circuit Board Test and Inspection Systems	9	5	6
Other Test Systems	3	4	5
Total	100%	100%	100%

Sales decreased 53% in 2001 to $1,440.6 million from $3,043.9 million in 2000. Semiconductor Test Systems sales decreased 65%, to $717.7 million in 2001 from $2,044.0 million in 2000, Connection Systems sales to unaffiliated customers decreased 26%, to $540.8 million in 2001 from $734.6 million in 2000, and Circuit Board Test and Inspection Systems sales decreased 6%, to $132.4 million in 2001 from $141.2 million in 2000. These decreases reflect the overall economic and industry market conditions described below. Circuit Board Test and Inspection Systems sales include the two-month impact of the GenRad acquisition which contributed sales of $19.0 million. Other Test Systems sales decreased 60%, to $49.7 million in 2001 from $124.1 million in 2000, which principally reflects the divestiture of Software Test Systems at the end of 2000 as well as the overall economic and industry market conditions described below. During the fourth quarter of 2000, Teradyne implemented Staff Accounting Bulletin No. 101 "Revenue Recognition in Financial Statements" (SAB 101) retroactive to the beginning of the year. Included in 2001 sales was $98.7 million related to shipments of customer orders in 2000 where title was retained by Teradyne until customer payment in order to perfect a security interest. Teradyne no longer retains title until customer payment.

Teradyne's business has been adversely impacted by the slowdown in economies worldwide including the effects of the hostilities begun in September 2001. Teradyne has also been adversely affected by the cyclical nature of the electronics and semiconductor industries, which experience recurring periods of oversupply of products and equipment of the type Teradyne sells. These factors have resulted in a downturn in the demand for Teradyne's products. During 2001, orders declined significantly across all of Teradyne's product lines when compared with the orders Teradyne received during 2000. The reduction in net orders across Teradyne for 2001 compared with 2000 was approximately $2,512.7 million. Teradyne's experience in previous downturns has been that orders improve as Teradyne's customers' capital expenditures increase. At present, however, Teradyne cannot say how long the current downturn will last or when

the situation will improve. In the absence of significant improvement, orders could remain low or decline further, and the amount of Teradyne's inventory, deferred tax assets, and certain long-lived assets considered realizable could be significantly reduced.

In 2001 and 2000, no single customer accounted for more than 10% of consolidated net sales. In 2001, Teradyne's three largest customers accounted for 24% of consolidated net sales.

Bookings

Net orders decreased 76% to $808.2 million in 2001 from $3,320.9 million in 2000. Net orders decreased in all operating segments and were led by a 85% decrease in Semiconductor Test Systems net orders. Connection Systems net orders, Circuit Board Test and Inspection Systems net orders, and Other Test Systems net orders decreased 64%, 33%, and 78%, respectively. Teradyne experienced cancellations of $285.5 million during 2001. Teradyne's net orders for its four principal operating segments for 2001 and 2000 were as follows:

	(in millions) 2001	2000
Semiconductor Test Systems	$294.0	$1,960.5
Connection Systems	385.0	1,082.0
Circuit Board Test and Inspection Systems	101.4	151.6
Other Test Systems	27.8	126.8
	$808.2	$3,320.9

Teradyne's backlog decreased 45% to $763.0 million in 2001 from $1,382.1 million in 2000. At December 31, 2001 and 2000, Teradyne's backlog of unfilled orders for its four principal operating segments was as follows:

	(in millions) 2001	2000
Semiconductor Test Systems	$317.2	$ 742.1
Connection Systems	357.6	534.4
Circuit Board Test and Inspection Systems	55.5	68.4
Other Test Systems	32.7	37.2
	$763.0	$1,382.1

Customers may delay delivery of products or cancel orders suddenly and without significant notice, subject to possible cancellation penalties. Due to possible customer changes in delivery schedules and cancellation of orders, Teradyne's backlog at any particular date is not necessarily indicative of the actual sales for any succeeding period. Delays in delivery schedules and/or cancellations of backlog during any particular period could have a material adverse effect on Teradyne's business and results of operations.

Gross Margin

Certain costs in 2001 and 2000 have been reclassified from cost of sales into engineering and development and selling and administrative. These reclassified costs consist of new product development costs incurred in manufacturing engineering, test technology and applications engineering costs supporting sales. The costs reclassified from cost of sales to engineering and development represent work performed to develop and implement manufacturing and test processes focused on the introduction of new product platforms. The costs reclassified from cost of sales to selling and administrative represent the development of applications programming used to demonstrate new product capabilities. The impact of the reclassifications is detailed below:

Increase / (Decrease)	Year Ended December 31, 2001	Year Ended December 31, 2000
(in thousands)		
Cost of sales.....	($57,046)	($62,325)
Engineering and development	39,750	47,104
Selling and administrative.	17,296	15,221

Cost of sales, excluding the charges described below, increased to 71% of sales in 2001 from 53% of sales in 2000. The percentage increase in 2001 was attributable to the decreased utilization of Teradyne's manufacturing capacity, as sales volume decreased while certain components of costs of sales remained fixed. The increase in the percentage of cost of sales was also impacted to a lesser extent by increased competitive price pressure as current semiconductor products mature and the mix of Teradyne's business changes as Connection Systems and Circuit Board Test and Inspection System sales, which have lower gross margins, become a larger percentage of Teradyne's business.

Teradyne introduced a number of new products in 2001. Generally, Teradyne's new products begin their product life with lower gross margins and margins improve as volume purchases increase and cost reduction activities are implemented. There can be no assurance that significant improvements in gross margins will be achieved on current or new Teradyne products through either volume purchases or cost reduction activities.

Cost of sales related to inventory provisions and other charges for asset impairments and vacated leases was $159.8 million in 2001. Inventory provision for excess and obsolete inventory was $105.2 million in 2001, which excludes the inventory writedowns for product line discontinuance, compared to $27.5 million in 2000, included in cost of sales, representing a 5% increase. The increase in the inventory provision was caused by the worldwide economic slowdown during 2001. Between 2000 and 2001, orders declined by approximately $2,512.7 million, a 76% decrease. This drop in orders combined with lead time requirements for inventory procurement and Teradyne's new product introduction plans necessitated additional charges for excess and obsolete inventory. During 2001, Teradyne recorded an inventory writedown in Semiconductor Test Systems due to the discontinuance of the Flash 750 product line of $32.3 million and related asset impairments of $4.6 million. In the third and fourth quarters of 2001, Teradyne recorded a charge of $15.4 million for certain impaired manufacturing assets and vacated space under operating leases at Connection Systems.

Engineering and Development

Engineering and development expenses, as a percentage of sales, increased to 20% in 2001 from 11% in 2000, with spending decreasing by $59.4 million. This spending decrease was primarily due to lower material costs and the impact of workforce reductions, salary cuts, and furloughs in Semiconductor Test Systems and Circuit Board Test and Inspection Systems, excluding the impact of the GenRad acquisition. Connection Systems engineering and development spending increased 5% from 2000 to 2001.

Selling and Administrative

Selling and administrative expenses increased to 19% of sales in 2001 from 12% of sales in 2000, with spending decreasing by $107.7 million. The decrease in spending was principally due to certain cost containment programs such as workforce reductions, salary cuts, and furloughs.

Restructuring and Other Charges

Restructuring and other charges include a workforce reduction and early retirement provision of $37.3 million, a charge for a Connection Systems impaired facility of $12.0 million, a charge for impaired assets of $1.9 million relating to the discontinuance of the Flash 750 product line in Semiconductor Test Systems, and a charge for vacated space under certain operating leases of $1.7 million in Circuit Board Test and Inspection Systems. There were approximately 2,900 employees terminated in 2001 across all functional groups. These terminations will result in future cost savings in 2002 of approximately $132.0 million. Teradyne has paid $23.8 million in severance benefits during 2001. All remaining severance benefits for employees terminated in 2001 will be paid by the fourth quarter of 2002.

Below is a table summarizing activity relating to restructuring and other charges:

	Severance and Benefits	Lease Payments on Vacated Facilities	Impaired Facilities	Impaired Assets	Total
	(in thousands)				
2001 provision	$ 37,278	$1,676	$ 12,000	$ 1,923	$ 52,877
Cash payments	(23,755)	--	--	--	(23,755)
Non-cash charges	--	--	(12,000)	(1,923)	(13,923)
Balance at December 31, 2001	$ 13,523	$1,676	$ --	$ --	$ 15,199

The accrual for severance and benefits is reflected in accrued employees' compensation and withholdings and the accrual for lease payments on vacated facilities is reflected in other accrued liabilities.

Interest income and expense

Interest income decreased by $2.4 million to $22.7 million in 2001 compared to $25.1 million in 2000. The decrease in 2001 was attributable to decreases in the average invested balances and lower interest rates. Interest expense increased by $2.3 million as a result of interest expense for two months associated with Teradyne's convertible notes.

Other income and expense

Included in other income in 2001 is a gain from the sale of Connections Systems aerospace and defense business of $14.8 million. Included in other expense for 2001 is Teradyne's proportionate share of a loss related to an equity method investment of $7.0 million.

Income before taxes

(Loss) income before income taxes and cumulative effect of change in accounting principle was a loss of $326.2 million in 2001 compared to income of $739.6 million in 2000. Semiconductor Test Systems, Connection Systems, Circuit Board Test and Inspection Systems, and Other Test Systems income before income taxes decreased $907.2 million, $167.5 million, $40.3 million, and $3.3 million, respectively in 2001 due to decreased sales in each group and the market conditions described above.

Income taxes

Teradyne's effective tax rate benefit was 38% in 2001. The effective tax rate provision for the year ended 2000 was 30%. The change in the tax rate is a result of a loss in 2001. In 2000, Teradyne was able to reduce its effective tax rate with tax benefits from its foreign sales corporation and Ireland manufacturing operations.

On a quarterly basis, Teradyne evaluates the realizability of its deferred tax assets and assesses the need for a valuation allowance. Realization of Teradyne's net deferred tax assets is dependent on its ability to generate approximately $415 million of future taxable income. Teradyne believes that it is more likely than not that its net deferred tax assets will be realized based on forecasted income. However, if Teradyne continues to incur significant losses for an extended period of time, it could be required to establish a valuation allowance against all or a significant portion of its net deferred tax assets. To the extent Teradyne establishes a valuation allowance, an expense will be recorded within the provision for income taxes line in the statement of operations.

In response to an adverse World Trade Organization (WTO) finding that the U.S. Foreign Sales Credit (FSC) tax provisions were a prohibited export subsidy, the U.S. repealed FSC and enacted replacement legislation (Extraterritorial Income Exclusion Act of 2000). The European Union filed a WTO challenge to the new law and the WTO has upheld the European Union's challenge. The U.S. has decided to appeal and the appellate process and final resolution of this matter could extend beyond 2002. The U.S. government and industry groups are evaluating options. It is not possible to predict what impact, if any, this issue will have on future earnings pending final resolution of the challenge. During the years ended December 31, 2001, 2000, and 1999, the FSC benefited Teradyne's effective tax rate as follows:

	2001	2000	1999

Export sales corporation	(0.7%)	(4.8%)	(4.7%)

2000 compared to 1999

Revenue

Sales increased 70% in 2000 to a record $3,043.9 million from $1,790.9 million in 1999. Semiconductor Test Systems shipments increased by 69% due to increased sales to semiconductor manufacturers and subcontractors as these customers increased capacity to meet their customer's requirements. Sales of Connection Systems to unaffiliated customers grew 97% as a result of significant growth in demand from networking, data storage, and other high technology customers. Circuit Board Test and Inspection Systems sales increased by 19% from 1999. Other Test Systems sales increased 40% from 1999 with increases in Broadband Test Systems of 10% and Software Test Systems of 64%. Due to the sale of a majority interest in the software test business in December 2000, Software Test Systems revenue will not be reflected on an on-going basis.

Bookings

Incoming net orders increased 52% from $2,190.6 million in 1999 to a record $3,320.9 million in 2000. Net orders increased in all operating segments and were led by a 159% increase in Connection Systems net orders. Semiconductor Test Systems net orders increased 24%. Broadband Test Systems net orders increased 77% and Circuit Board Test and Inspection Systems and Software Test Systems increased 26% and 70%, respectively. Teradyne's backlog increased 41% to a record $1,382.1 million.

Gross Margin

Certain costs in 2000 and 1999 have been reclassified from cost of sales into engineering and development and selling and administrative. These reclassified costs consist of new product development costs incurred in manufacturing engineering, test technology and applications engineering costs supporting sales. The costs

reclassified from cost of sales to engineering and development represent work performed to develop and implement manufacturing and test processes focused on the introduction of new product platforms. The costs reclassified from cost of sales to selling and administrative represent the development of applications programming used to demonstrate new product capabilities. The impact of the reclassifications is detailed below:

Increase / (Decrease)	Year Ended December 31, 2000	Year Ended December 31, 1999
(in thousands)		
Cost of sales.....	$(62,325)	$(43,536)
Engineering and development	47,104	33,291
Selling and administrative.	15,221	10,245

Costs of sales as a percentage of sales decreased from 56% of sales in 1999 to 53% of sales in 2000. The decrease in cost of sales was primarily due to the increased utilization of Teradyne's manufacturing overhead as sales volume increased while certain components of cost of sales remained fixed.

Engineering and Development

Engineering and development expenses decreased from 15% of sales in 1999 to 11% of sales in 2000, even though spending increased $86.2 million. The increase in spending was primarily due to new product development expenses in Semiconductor Test Systems, and, to a lesser extent, increased expenses related to product development in Connection Systems, Circuit Board Test and Inspection Systems, and Software Test Systems.

Selling and Administrative

Selling and administrative expenses as a percentage of sales decreased from 15% in 1999 to 12% in 2000. Spending increased by $111.1 million year over year in support of increased Semiconductor Test Systems, Connection Systems, and Software Test Systems sales.

Interest income and expense

Interest income increased $7.8 million to $25.1 million in 2000 compared to $17.3 million in 1999. Interest income increased due to an increase in Teradyne's average invested balances and higher interest rates.

Other income and expense

Included in other income in 2000 is an immaterial gain relating to the divestiture of the software test business.

Income before taxes

Income before income taxes and cumulative effect of change in accounting principle increased $465.8 million from $273.8 million in 1999 to $739.6 million in 2000. Semiconductor Test Systems, Connection Systems, Circuit Board Test and Inspection Systems, and Other Test Systems income before income taxes increased $387.4 million, $91.8 million, $7.0 million, and $9.5 million, respectively in 2000 due to increased sales in each group.

Income taxes

Teradyne's effective tax rate was 30% in 2000 and 1999. Teradyne continued to utilize export sales corporation benefits and other tax benefits to operate below the U.S. statutory rate of 35%.

Liquidity and Capital Resources

Teradyne's cash, cash equivalents and marketable securities balance increased $121.8 million in 2001, to $586.2 million. Teradyne used cash from operating activities of $79.0 million in 2001 and generated cash from operating activities in 2000 and 1999 of $470.9 million and $367.5 million, respectively. Net income (loss), adjusted to exclude the effects of non-cash items, used cash of $77.1 million in 2001, and provided cash of $501.6 million and $279.7 million in 2000 and 1999, respectively. Changes in operating assets and

liabilities net of businesses sold and acquired used cash of $1.9 million in 2001 as accounts payable and accruals balances decreased as purchases slowed. The decrease in accounts payable and accruals was partially offset by reduced accounts receivable and inventory balances. Changes in operating assets and liabilities used cash of $30.7 million in 2000 and generated cash of $87.7 million in 1999.

Teradyne used $247.3 million of cash for investing activities in 2001, $312.3 million in 2000, and $244.8 million in 1999. Investing activities consist of purchases, sales, and maturities of marketable securities, proceeds from the sale of businesses, cash acquired in business acquisitions, and purchases of capital assets to support long-term growth. Capital expenditures decreased by $56.8 million in 2001 compared with 2000, primarily in the Semiconductor Test Systems segment. This was due to the actions taken by Teradyne in 2001 to reduce planned capital expenditures due to current market conditions. Capital expenditures were $241.4 million in 2001, $298.2 million in 2000, and $151.2 million in 1999.

Teradyne generated $401.5 million of cash from financing activities in 2001, used $97.5 million in 2000, and used $126.8 million in 1999. Financing activities include the issuance of convertible notes, mortgage borrowings, sales and repurchases of Teradyne's common stock, as well as repayments of debt. In 2001, Teradyne assumed debt of $89.7 million from the GenRad acquisition which Teradyne repaid on October 26, 2001. During 2001, 2000, and 1999 issuances of common stock under stock option and stock purchase plans generated $58.5 million, $55.3 million, and $82.3 million, respectively. Teradyne used cash for the acquisition of treasury stock of $147.5 million and $207.8 million in 2000 and 1999, respectively. Since 1996, Teradyne has used $540.8 million of cash to repurchase 20.0 million shares of its common stock on the open market though no cash was used in 2001 to repurchase shares of common stock.

On October 24, 2001, Teradyne sold $400 million principal amount of 3.75% Convertible Senior Notes due 2006 (the "Notes") in a private placement and received net proceeds of $389 million. The Notes are convertible at the option of the holders at a rate which is equivalent to a conversion price of approximately $26.00 per share, which is equal to a conversion rate of approximately 38.4615 shares of common stock per $1,000 principal amount of Notes. The Notes are redeemable by Teradyne at any time after October 18, 2004 at specified prices. Teradyne will begin making annual interest payments of up to $15 million, paid semi-annually, on the Notes commencing on April 15, 2002. The Notes are senior unsecured obligations of Teradyne that rank equally with Teradyne's existing and future unsecured and unsubordinated indebtedness. In the event of a change in control by which Teradyne merges with or sells substantially all of its assets to a third party, the holders of the Notes may be able to require Teradyne to redeem some or all of the Notes either in discounted Teradyne common stock or in cash. On February 8, 2002, the Securities and Exchange Commission declared effective a Registration Statement on Form S-3 covering both the Notes and the shares of common stock into which they can be converted.

On December 19, 2001, Teradyne obtained a loan of approximately $45 million in the form of a 7.5% mortgage loan maturing on January 1, 2007, (the "Mortgage"). Principal payments are made according to a twenty-year amortization schedule through December 2006, with the remaining principal due on January 1, 2007. Teradyne began making monthly principal and interest payments of $0.4 million on February 1, 2002.

On October 26, 2001, Teradyne completed its acquisition of GenRad, Inc. of Westford, MA, a leading manufacturer of electronic automatic test equipment, related software and diagnostic solutions. GenRad's business has been made part of the Circuit Board Test and Inspection Systems operating segment. Under the

terms of the acquisition, each outstanding share of GenRad common stock was converted into 0.1733 shares of Teradyne common stock. The total number of Teradyne shares exchanged for the shares of GenRad, based on the shares of GenRad outstanding as of the closing, was approximately 5.0 million.

The following table reflects Teradyne's current contractual obligations:

(in thousands)	Non-cancelable Lease Commitments	Convertible Senior Notes	Mortgage Notes Payable	Notes Payable	Other Debt	Total
2002.....	$ 24,019		$ 1,009	$6,557	$ 254	$ 31,839
2003.....	20,417		1,088		254	21,759
2004.....	17,532		1,172		254	18,958
2005.....	14,754		1,263		254	16,271
2006.....	10,490	$400,000	1,244		254	411,988
Beyond 2006..	34,442		44,264		1,635	80,341
Total.....	$121,654	$400,000	$50,040	$6,557	$2,905	$581,156

Teradyne believes its cash, cash equivalents, and marketable securities balance of $586.2 million, together with a tax refund of $85.2 million received in March 2002, will be sufficient to meet working capital and expenditure needs for the foreseeable future. Depending on market conditions and funding requirements, Teradyne may seek additional external financing.

Inflation has not had a significant long-term impact on earnings.

Recently Issued Accounting Pronouncements

In July 2001, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards No. 141 ("SFAS 141"), "Business Combinations." SFAS 141 requires the purchase method of accounting for business combinations initiated after June 30, 2001 and eliminates the pooling-of-interest method.

In July 2001, FASB issued SFAS 142, "Goodwill and Other Intangible Assets", which is effective for Teradyne on January 1, 2002. SFAS 142 requires, among other things, the discontinuance of goodwill amortization and includes provisions for the reclassification of certain existing recognized intangibles as goodwill, reassessment of the useful lives of existing recognized intangibles, and reclassification of certain intangibles out of previously reported goodwill. In 2001, Teradyne recorded goodwill amortization of approximately $3.9 million. At December 31, 2001 Teradyne had $190.3 million of goodwill which will not be amortized. In 2002, Teradyne will record amortization of approximately $7.4 million relating to other intangibles primarily in connection with the GenRad acquisition. SFAS 142 also requires Teradyne to complete a transitional goodwill impairment test six months from the date of adoption. Teradyne has completed a preliminary evaluation of the impact of SFAS 142 and currently does not expect to record a goodwill impairment.

In August 2001, FASB issued SFAS 143, "Accounting for Obligations Associated

with the Retirement of Long-Lived Assets." SFAS 143 provides the accounting requirements for retirement obligations associated with tangible long-lived assets. SFAS 143 is effective for financial statements for fiscal years beginning after June 15, 2002. Teradyne has determined that SFAS 143 will not have an impact on its financial position and results of operations.

In October 2001, FASB issued SFAS 144, "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS 144 requires one method of accounting for long lived assets disposed of by sale. SFAS 144 is effective for financial statements issued for fiscal years beginning after December 15, 2001. Teradyne has adopted SFAS 144 effective January 1, 2002. SFAS 144 did not have an impact on Teradyne's financial position or results of operations.

Certain Factors That May Affect Future Results

From time to time, information provided by Teradyne, statements made by its employees or information included in its filings with the Securities and Exchange Commission (including this Form 10-K and Teradyne's Annual Report to Shareholders) contain statements which are not purely historical facts, but are forward looking statements, made under the Safe Harbor provisions of the Private Securities Litigation Reform Act of 1995, which involve risks and uncertainties. In particular, forward looking statements are contained in "Item 1: Business", and in "Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations" relating to projections, plans, and objectives for Teradyne's business, financial condition, operating results, future economic performance or statements relating to the sufficiency of capital to meet working capital, planned capital expenditures, and expectations as to customer orders. Teradyne's actual future results may differ significantly from those stated in any forward looking statements. Factors that may cause such differences include, but are not limited to, the factors discussed below. Each of these factors, and others, are discussed from time to time in Teradyne's filings with the Securities and Exchange Commission.

Teradyne's Business Is Impacted by the Slowdown in Economies Worldwide.

Teradyne's business has been negatively impacted by the slowdown in the economies of the United States, Asia and elsewhere that began in the second half of 2000. The uncertainty regarding the growth rate of the worldwide economies has caused companies to reduce capital investment and may cause further reduction of such investments. These reductions have been particularly severe in the electronics and semiconductor industry which Teradyne serves and have contributed to Teradyne incurring losses in recent periods. Teradyne cannot predict if or when the growth rate of worldwide economies will rebound, whether the growth rate of its business will rebound when the worldwide economies begin to grow, or if or when Teradyne will return to profitability. While Teradyne's diverse business may allow it to perform better than some companies in periods of economic decline, the effects of the economic decline are being felt across all of Teradyne's business segments and have significantly slowed customer orders.

Teradyne's Business is Dependent on the Current and Anticipated Market for Electronics.

Teradyne's business and results of operations depend in significant part upon capital expenditures of manufacturers of semiconductors and other electronics, which in turn depend upon the current and anticipated market demand for those products. The current and anticipated market demand for electronics has been impacted by the economic slowdown that began in the latter

portions of 2000 and the effects of the hostilities begun in September 2001. Historically, the electronic and semiconductor industry has been highly cyclical with recurring periods of over-supply, which often have had a severe negative effect on demand for test equipment, including systems manufactured and marketed by Teradyne. Teradyne believes that the markets for newer generations of electronic products such as those that Teradyne manufactures and markets will also be subject to similar fluctuations. Teradyne is dependent on the timing of customer orders and the deferral or cancellation of previous customer orders could have an adverse effect on its results of operations. Teradyne cannot assure you that the downward trend in new orders will turn around in the future or that any increase in sales or new orders for a calendar quarter will be sustained in subsequent quarters. In addition, any factor adversely affecting the electronics industry or particular segments within the electronics industry may adversely affect Teradyne's business, financial condition and operating results.

Teradyne Has Taken and Expects to Continue to Take Measures to Address the Current Slowdown in the Market for Its Products Which Could Have Long-term Negative Effects on Teradyne's Business.

Teradyne has taken and expects to take additional measures to address the current slowdown in the market for its products. In particular, Teradyne has reduced its workforce, frozen hiring, delayed salary increases, reduced the pay of substantially all employees, implemented furloughs, discontinued its Flash 750 memory product line, recorded asset impairment charges and reduced its planned capital expenditures and expense

budgets. These measures have reduced expenses in the face of decreased revenues due to decreased or cancelled customer orders. However, each measure Teradyne has taken and any additional measures taken in the future to contain expenditures could have long-term negative effects on Teradyne's business by reducing its pool of technical talent, decreasing or slowing improvements in its products, and making it more difficult for Teradyne to respond to customers or competitors.

Teradyne's Business May Be Adversely Impacted by Acquisitions Which May Affect Its Ability to Manage and Maintain Its Business.

Since Teradyne's inception, it has acquired a number of businesses. In the future, Teradyne may undertake additional acquisitions of businesses that complement its existing operations. Such past or future acquisitions could involve a number of risks, including:

- the possibility that one or more such acquisitions may not close due to closing conditions in the acquisition agreements, the inability to obtain regulatory approval, or the inability to meet conditions imposed for government or court approvals for the transaction;
- the diversion of the attention of management and other key personnel;
- the inability to effectively integrate an acquired business into Teradyne's culture, product and service delivery methodology and other standards, controls, procedures and policies;
- the inability to retain the management, key personnel and other employees of an acquired business;
- the inability to retain the customers of an acquired business;
- the possibility that Teradyne's reputation will be adversely affected by customer satisfaction problems of an acquired business;
- potential known or unknown liabilities associated with an acquired business, including but not limited to regulatory, environmental and tax

liabilities;
- the amortization of acquired identifiable intangibles, which may adversely affect Teradyne's reported results of operations; and
- litigation which has or which may arise in the future in connection with such acquisitions.

For example, in connection with the August 2000 acquisition of each of Herco Technology Corp., a California company, and Perception Laminates, Inc., a California company, a complaint was filed by the former owners of those companies on or about September 5, 2001 naming as defendants Teradyne and two of its executive officers. This case is further described in "Item 3: Legal Proceedings" on this Form 10-K. Teradyne cannot predict the outcome of the lawsuit at this time, and can give no assurance that it will not materially adversely affect Teradyne's financial position or results of operations.

In addition to the foregoing, any acquired business could significantly underperform relative to Teradyne's expectations.

Teradyne Currently Faces, and in the Future May Be the Subject of, Securities Class Action Litigation Due to Past or Future Stock Price Volatility.

When the market price of a stock has been volatile, holders of that stock sometimes institute securities class action litigation against the company that issued the stock. Currently, Teradyne and two if its executive officers are named as defendants in three purported class action complaints that were filed in the United States District Court for the District of Massachusetts, Boston, Massachusetts, on or about October 16, 2001, October 19, 2001 and November 7, 2001. The complaints allege, among other things, that the defendants violated Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, by making, during the period from July 14, 2000 until October 17, 2000, material misrepresentations and omissions to the investing public regarding Teradyne's business operations and future prospects. The complaints seek unspecified damages, including compensatory damages and recovery of reasonable attorneys' fees and costs. Teradyne strongly believes that the purported class action complaints lack merit and it intends to defend against the claims vigorously. However, Teradyne could

incur substantial costs defending the lawsuits. The lawsuits could also divert the time and attention of Teradyne's management. Teradyne cannot predict the outcome of the lawsuits at this time, and can give no assurance that they will not materially adversely affect Teradyne's financial position or results of operations.

Teradyne's Business May be Adversely Impacted by Divestitures of Lines of Business Which May Affect Its Ability to Manage and Maintain Its Business.

Since Teradyne's inception, it has divested itself of certain lines of business. In the future, Teradyne may undertake additional such divestitures. Such past or future divestitures could involve a number of risks, including:

- the diversion of the attention of management and other key personnel;
- disruptions and other effects caused by the divestiture of a line of business on Teradyne's culture, product and service delivery methodology and other standards, controls, procedures and policies;
- customer satisfaction problems caused by the loss of a divested line of business; and
- the decreased diversification of Teradyne's product lines caused by the divestiture of a line of business which may make Teradyne's operating

results subject to increased market fluctuations.

If Teradyne Is Unable to Protect Its Intellectual Property, Teradyne May Lose a Valuable Asset or May Incur Costly Litigation to Protect Its Rights.

Teradyne's products incorporate technology that it protects in several ways, including patents, copyrights and trade secrets. While Teradyne believes that its patents, copyrights and trade secrets have value in general, no single one is in itself essential. At times, Teradyne has been notified that it may be in violation of patents held by others. An assertion of patent infringement against Teradyne, if successful, could have a material adverse effect on its ability to sell its products, or could require a lengthy and expensive defense which could adversely affect its operating results.

If Teradyne Fails to Develop New Technologies to Adapt to Its Customers' Needs and if Its Customers Fail to Accept Its New Products, Teradyne's Revenues Will Be Adversely Affected.

Teradyne believes that its technological position depends primarily on the technical competence and creative ability of its engineers. Teradyne's development of new technologies, commercialization of those technologies into products, and market acceptance and customer demand for those products is critical to Teradyne's success. Successful product development and introduction depends upon a number of factors, including:

- new product selection;
- development of competitive products by competitors;
- timely and efficient completion of product design;
- timely and efficient implementation of manufacturing; and
- assembly processes and product performance at customer locations.

Intense Competition in Teradyne's Industry May Affect Its Revenues.

Teradyne faces substantial competition throughout the world in each of its operating segments. Some of Teradyne's competitors have substantial financial and other resources to pursue engineering, manufacturing, marketing and distribution of their products. Teradyne also faces competition from internal suppliers at several of its customers. Some of Teradyne's competitors have introduced or announced new products with certain performance characteristics which may be considered equal or superior to those Teradyne currently offers. Teradyne expects its competitors to continue to improve the performance of their current products and to introduce new products or new technologies that provide improved cost of ownership and performance characteristics. New

product introductions by competitors could cause a decline in sales or loss of market acceptance of Teradyne's products. Moreover, increased competitive pressure could lead to intensified price based competition, which could materially adversely affect Teradyne's business, financial condition and results of operations.

Teradyne Is Subject to Risks of Operating Internationally.

Teradyne derives a significant portion of its total revenue from customers outside the United States. Teradyne's international sales are subject to significant risks and difficulties, including:

- unexpected changes in legal and regulatory requirements and in policy changes affecting international markets;

- changes in tariffs and exchange rates;
- political and economic instability and acts of terrorism;
- difficulties in accounts receivable collection;
- difficulties in staffing and managing international operations; and
- potentially adverse tax consequences, such as the World Trade Organization's dispute against the U.S. Foreign Sales Credit.

Teradyne May Incur Significant Liabilities if It Fails to Comply With Environmental Regulations.

Teradyne is subject to environmental regulations relating to the use, storage, discharge, site cleanup, and disposal of hazardous chemicals used in its manufacturing processes. If Teradyne fails to comply with present and future regulations, or is required to perform site remediation, Teradyne could be subject to future liabilities or the suspension of production. Present and future regulations may also:

- restrict Teradyne's ability to expand its facilities;
- require Teradyne to acquire costly equipment; or
- require Teradyne to incur other significant costs and expenses.

Teradyne Has Substantially Increased Its Indebtedness.

On October 24, 2001, Teradyne completed a private placement of $400 million principal amount of 3.75% Convertible Senior Notes (the "Notes") due 2006 and received net proceeds of $389 million. On December 19, 2001, Teradyne obtained a loan of approximately $45 million in the form of a 7.5% mortgage loan maturing on January 1, 2007 (the "Mortgage"). As a result, Teradyne has incurred approximately $445 million principal amount of additional indebtedness, substantially increasing its ratio of debt to total capitalization. Teradyne may incur substantial additional indebtedness in the future. The level of Teradyne's indebtedness, among other things, could:

- make it difficult for Teradyne to make payments on its debt and other obligations;
- make it difficult for Teradyne to obtain any necessary future financing for working capital, capital expenditures, debt service requirements or other purposes;
- require the dedication of a substantial portion of any cash flow from operations to service for indebtedness, thereby reducing the amount of cash flow available for other purposes, including capital expenditures;
- limit Teradyne's flexibility in planning for, or reacting to changes in, its business and the industries in which Teradyne competes;
- place Teradyne at a possible competitive disadvantage with respect to less leveraged competitors and competitors that have better access to capital resources; and
- make Teradyne more vulnerable in the event of a further downturn in its business.

There can be no assurance that Teradyne will be able to meet its debt service obligations, including its obligations under the Notes and the Mortgage.

Teradyne May Not Be Able to Satisfy a Change in Control Offer.

The indenture governing the Notes contains provisions that apply to a change in control of Teradyne. If someone triggers a change in control as defined in the indenture, Teradyne may be required to offer to purchase the Notes with cash. If Teradyne has to make that offer, Teradyne cannot be sure that it will have enough funds to pay for all the Notes that the holders could tender.

In the event of a change in control of Teradyne, the mortgage lender may elect to declare all amounts due under the Mortgage to be immediately due and payable, and may elect to take possession of or sell the property subject to the Mortgage.

Teradyne May Not Be Able to Pay Its Debt and Other Obligations.

If Teradyne's cash flow is inadequate to meet its obligations, Teradyne could face substantial liquidity problems. If Teradyne is unable to generate sufficient cash flow or otherwise obtain funds necessary to make required payments on the Notes, the Mortgage, or certain of its other obligations, Teradyne would be in default under the terms thereof, which would permit the holders of those obligations to accelerate their maturity and also could cause defaults under future indebtedness Teradyne may incur. Any such default could have a material adverse effect on Teradyne's business, prospects, financial position and operating results. In addition, Teradyne cannot assure that it would be able to repay amounts due in respect of the Notes or the Mortgage if payment of those obligations were to be accelerated following the occurrence of any other event of default as defined in the instruments creating those obligations. Moreover, Teradyne cannot assure that it will have sufficient funds or will be able to arrange for financing to pay the principal amount due on the Notes or the Mortgage at their respective maturities.

Teradyne May Need Additional Financing, Which Could Be Difficult to Obtain.

Teradyne expects that its existing cash and marketable securities, cash generated from operations, the proceeds of the Notes offering in October 2001 and the proceeds from the Mortgage financing in December 2001, will be sufficient to meet Teradyne's cash requirements to fund operations and expected capital expenditures for the foreseeable future. In the event Teradyne may need to raise additional funds, Teradyne cannot be certain that it will be able to obtain such additional financing on favorable terms, if at all. Further, if Teradyne issues additional equity securities, stockholders may experience additional dilution or the new equity securities may have rights, preferences or privileges senior to those of existing holders of common stock. Future financings may place restrictions on how Teradyne operates its business. If Teradyne cannot raise funds on acceptable terms, if and when needed, Teradyne may not be able to develop or enhance its products and services, take advantage of future opportunities, grow its business or respond to competitive pressures, which could seriously harm Teradyne's business.

Provisions of Teradyne's Charter and By-Laws and Massachusetts Law Make a Takeover of Teradyne More Difficult.

Teradyne's basic corporate documents, its stockholder rights plan, and Massachusetts law contain provisions that could discourage, delay or prevent a change in the control of Teradyne, even if a change of control might be regarded as beneficial to some or all of Teradyne's stockholders.

Teradyne's Operating Results Are Likely to Fluctuate Significantly.

Teradyne's quarterly and annual operating results are affected by a wide variety of factors that could materially adversely affect revenues and profitability, including:

- competitive pressures on selling prices;
- the timing of customer orders and the deferral or cancellation of orders previously received;
- provisions for excess and obsolete inventory;
- changes in product mix;
- Teradyne's ability to introduce new products and technologies on a

timely basis;
. the introduction of products and technologies by Teradyne's competitors;

. market acceptance of Teradyne's and its competitors' products;
. fulfilling backlog on a timely basis;
. reliance on sole source suppliers;
. potential retrofit costs;
. the level of orders received which can be shipped in a quarter; and
. the timing of investments in engineering and development.

In particular, due to Teradyne's introduction of a number of new, complex test systems in 2001 and the planned introduction of other such systems in 2002, there can be no assurance that Teradyne will not experience delays in shipment of its products or that its products will achieve customer acceptance.

As a result of the foregoing and other factors, Teradyne has and may continue to experience material fluctuations in future operating results on a quarterly or annual basis which could materially and adversely affect its business, financial condition, operating results and stock price.

Item 7a: Quantitative and Qualitative Disclosures About Market Risks

Concentration of Credit Risk

Financial instruments which potentially subject Teradyne to concentrations of credit risk consist principally of cash investments, forward currency contracts, and accounts receivable. Teradyne 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. Teradyne 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 geographically dispersed customers. Teradyne performs ongoing credit evaluations of its customers' financial condition and does not require collateral to secure accounts receivable.

Exchange Rate Risk Management

Teradyne regularly enters into forward contracts in European and Japanese currencies to hedge its overseas net monetary position and has in the past entered into forward contracts to hedge non-U.S. currency forecasted transactions. Forward currency contracts generally have maturities of less than one year. These contracts are used to reduce Teradyne's risk associated with exchange rate movements, as gains and losses on these contracts are intended to offset exchange losses and gains on underlying exposures. Teradyne does not engage in currency speculation.

At December 31, 2001, the face amount of outstanding forward currency contracts to buy U.S. dollars to hedge those currency exposures associated with certain assets and liabilities denominated in non-functional currencies was $11.0 million. A 10% fluctuation in exchange rates for these currencies would change the fair value by approximately $1.3 million. However, since these contracts hedge non-U.S. currency assets and liabilities, any change in the fair value of the contracts would be offset by opposite changes in the underlying value of these assets and liabilities being hedged. The hypothetical movement was estimated by calculating the fair value of the forward currency contracts at December 31, 2001 and comparing that with those calculated using hypothetical forward currency exchange rates.

Interest Rate Risk Management

At December 31, 2001, the fair value of outstanding short and long-term marketable securities was approximately $270.0 million. A hypothetical 10% increase in interest rates for securities contained in the investment portfolio would change the fair value by approximately $2.3 million. Market risk was estimated as the potential decrease in the fair value resulting from a hypothetical increase in interest rates for issues contained in the investment portfolio.

REPORT OF MANAGEMENT

Management is responsible for the preparation and integrity of the consolidated financial statements appearing in this Annual Report on Form 10-K. The financial statements were prepared in conformity with accounting principles generally accepted in the United States of America appropriate in the circumstances and, accordingly, include some amounts based on management's best judgments and estimates. Financial information in this Annual Report on Form 10-K is consistent with that in the financial statements.

Management is responsible for maintaining a system of internal business controls and procedures to provide reasonable assurance, at an appropriate cost/benefit relationship, that assets are safeguarded and that transactions are authorized, recorded and reported properly. The internal control system is augmented by appropriate reviews by management, written policies and guidelines, careful selection and training of qualified personnel and a written code of business ethics applicable to all employees of Teradyne and its subsidiaries. Management believes that Teradyne's internal controls provide reasonable assurance that assets are safeguarded against material loss from unauthorized use or disposition and that the financial records are reliable for preparing financial statements and other data and maintaining accountability for assets.

The Audit Committee of the Board of Directors, composed solely of Directors who are not employees or officers of Teradyne, meets periodically with the independent accountants, internal auditors and management to discuss internal business controls, auditing and financial reporting matters. The Audit Committee reviews with the independent accountants the scope and results of the audit. The Audit Committee also meets with the independent accountants without management present to ensure that the independent accountants have free access to the Audit Committee.

The independent accountants, PricewaterhouseCoopers LLP, are engaged to audit the consolidated financial statements of Teradyne and to conduct such tests and related procedures as they deem necessary in accordance with auditing standards generally accepted in the United States of America. The opinion of the independent accountants, based upon their audits of the consolidated financial statements, is contained in this Annual Report on Form 10-K.

/S/ GEORGE W. CHAMILLARD

George W. Chamillard
Chairman, President and Chief Executive Officer

/S/ GREGORY R. BEECHER

Gregory R. Beecher

Vice President and Chief Financial Officer
March 29, 2002

Item 8: Financial Statements and Supplementary Data

REPORT OF INDEPENDENT ACCOUNTANTS

To the Directors and Shareholders of Teradyne, Inc.:

In our opinion, the consolidated financial statements listed in the index appearing under Item 14(a)(1) present fairly, in all material respects, the financial position of Teradyne, Inc. and its subsidiaries at December 31, 2001 and 2000, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2001 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the index appearing under Item 14(a)(2) presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. These financial statements and financial statement schedule are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements and financial statement schedule 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.

As discussed in Note C to the consolidated financial statements, during the year ended December 31, 2000 the Company changed its method of recognizing revenue.

PricewaterhouseCoopers LLP

Boston, Massachusetts
January 15, 2002

TERADYNE, INC.
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2001 AND 2000

ASSETS

Current assets:
Cash and cash equivalents..... $
Marketable securities.....

Accounts receivable, less allowance for doubtful accounts of $6,294 and $5,176 in 2001 and 2000, respectively	
Income tax receivable and prepaid amounts	
Inventories	
Parts	
Assemblies in process	
Finished goods	
Deferred tax assets	
Prepayments and other current assets	
Total current assets	1,
Property, plant, and equipment:	
Land	
Buildings and improvements	
Machinery and equipment	
Construction in progress	
Total	1,
Less: Accumulated depreciation	(
Net property, plant, and equipment	
Marketable securities	
Deferred tax assets--long-term	
Goodwill	
Intangible and other assets	
Total assets	$2,
LIABILITIES	
Current liabilities:	
Notes payable--banks	$
Current portion of long-term debt	
Accounts payable	
Accrued employees' compensation and withholdings	
Deferred revenue and customer advances	
Other accrued liabilities	
Accrued income taxes	
Total current liabilities	
Long-term other accrued liabilities	
Deferred tax liabilities	
Long-term debt	
Commitments and contingencies (Note J)	
Total liabilities	
SHAREHOLDERS' EQUITY	
Common stock, $0.125 par value, 1,000,000 shares authorized, 181,119 and 172,559 net shares issued and outstanding in 2001 and 2000, respectively	
Additional paid-in capital	
Accumulated other comprehensive loss	
Retained earnings	1,
Total shareholders' equity	1,