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 OCTOBER 31, 1998

OR

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

FOR THE TRANSITION PERIOD FROM_______________ TO ________________

COMMISSION FILE NO. 1-7819

ANALOG DEVICES, INC.

(Exact name of registrant as specified in its charter)

| | |
|---|---|
| MASSACHUSETTS | 04-2348234 |
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification No.) |
| ONE TECHNOLOGY WAY, NORWOOD, MA | 02062-9106 |
| (Address of principal executive offices) | (Zip Code) |

(781) 329-4700

(Registrant's telephone number, including area code)

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SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

| | |
|---|---|
| COMMON STOCK $.16 2/3 PAR VALUE | NEW YORK STOCK EXCHANGE |
| Title of Each Class | Name of Each Exchange on Which Registered |

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

NONE

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

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 such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES X NO

The aggregate market value of the voting stock held by non-affiliates of the registrant was approximately $4,932,238,195 based on the closing price of the Common Stock on the New York Stock Exchange Composite Tape reporting system on December 31, 1998.

As of December 31, 1998, there were 160,576,413 shares of $.16 2/3 par value Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

| DOCUMENT DESCRIPTION | 10-K PART |
|---|---|
| Portions of Annual Report to Shareholders for the fiscal year ended October 31, 1998 | I and II |
| Portions of the Registrant's Proxy Statement for the Annual Meeting of Stockholders to be held March 9, 1999 | III |

# PART I

## ITEM 1. BUSINESS

### COMPANY OVERVIEW

Analog Devices, Inc. (Analog, ADI or the Company) is a semiconductor company that designs, manufactures and markets precision high-performance integrated circuits (ICs) used in analog and digital signal processing. Virtually all of ADI's products are components, which are typically incorporated by original equipment manufacturers (OEMs) in a wide range of equipment and systems for use in communications, computer, industrial, instrumentation, military/aerospace, automotive and high-performance consumer electronics applications.

The Company's principal products include general-purpose, standard-function analog and mixed-signal ICs and DSP ICs. DSP ICs include general-purpose digital signal processing ICs (DSPs) and application-specific devices that typically incorporate analog and mixed-signal circuitry and a DSP core.

The Company sells its products worldwide through a direct sales force, third-party industrial distributors and independent sales representatives. Approximately 50% of fiscal 1998 revenue was derived from customers in North America, while most of the balance was derived from customers in Western Europe and the Far East.

ADI is headquartered near Boston in Norwood, Massachusetts, and has manufacturing facilities in Massachusetts, California, North Carolina, Ireland, the Philippines and Taiwan. Founded in 1965, ADI employs approximately 7,200 persons worldwide.

### INDUSTRY BACKGROUND

Real-world phenomena, such as temperature, pressure, sound, images, speed and acceleration are inherently analog in nature, consisting of continuously varying information. This information can be detected and measured using analog sensors, which represent real-world phenomena by generating continuously varying voltages and currents. The signals from these sensors are initially processed using analog methods, such as amplification, filtering and shaping. They are then usually converted to digital form for input to a microprocessor, which is used to manipulate, store or display the information. In many cases the signals are further processed after conversion to digital form using a technology called "digital signal processing," or DSP. In addition, digital signals are frequently converted to analog form to provide signals for analog display, sound, or control functions. These manipulations and transformations are known collectively as "real-world signal processing."

Significant advances in semiconductor technology over the past 10 to 15 years have led to substantial increases in the performance and functionality of ICs used in signal processing applications. These advances include the ability to create VLSI (Very Large Scale Integration) mixed-signal ICs that contain both high-performance analog circuitry and large amounts of high-density digital circuitry. The analog circuitry portion of the IC is used for manipulating real-world signals while still in analog form and for converting analog signals into digital form (or vice versa), and the digital portion is used for further processing analog signals subsequent to their conversion to digital form. The ICs resulting from these advances are used as components in equipment and systems to achieve higher performance and more efficient signal processing.

### MARKETS AND APPLICATIONS

The Company's products are sold primarily to OEMs for incorporation into equipment, instruments and systems sold to end users for a wide variety of applications, including engineering, medical and scientific instruments; industrial equipment; communications equipment; computers and computer peripherals; military/aerospace equipment; high-end consumer electronics products and automotive products. The Company's growth has been aided both by the expansion of these markets and the increasing need for high-performance real-time signal processing.

Listed below are some of the characteristics of each of the Company's major markets:

COMMUNICATIONS--includes data and fax modems, digital cellular telephones and portable, wireless communication base station equipment and broadband wired applications. The need for ever higher speed, coupled with more reliable, more bandwidth-efficient communications is creating increasing demand for systems that include both digital and analog signal processing capability. Demand for signal processing ICs for this market is also being driven by the equipment manufacturers' need for components that enable them to develop cost-effective products that feature high performance, small size, low weight and minimal power consumption.

INDUSTRIAL--includes data acquisition systems, automatic process control systems, robotics, environmental control systems and automatic test equipment (ATE). These products generally require ICs that offer performance greater than that available from commodity-level ICs, but generally do not have production volumes that warrant custom or application-specific ICs. Combinations of analog ICs are therefore usually employed to achieve the necessary functionality, except in ATE applications where the high level of electronic circuitry required per tester has created opportunities for the design of system-level ICs for this application.

INSTRUMENTATION--includes engineering, medical and scientific instruments. These products are usually designed using the highest performance analog ICs available, where production volumes generally do not warrant custom or application-specific ICs.

COMPUTERS AND COMPUTER PERIPHERALS--includes high-performance personal computers, workstations and peripheral devices such as displays and scanners. The Company currently supplies a variety of ICs used in this market for functions such as graphic displays; interfaces between PCs and peripherals such as modems and printers; power and battery management; and enhanced sound input and output capability for business and entertainment applications.

MILITARY/AEROSPACE--includes military, commercial avionics and space markets, all of which require high-performance ICs that meet rigorous environmental and reliability specifications. Nearly all of the Company's analog ICs can be supplied in versions that meet appropriate military standards. In addition, many products can be supplied to meet the standards required for broadcast satellites and other commercial space applications. Most of the Company's products sold in this market are derived from standard commercial grade ICs, although the Company sometimes develops products expressly for military/aerospace applications.

CONSUMER ELECTRONICS--The emergence of high-performance consumer products, such as compact disc players, DVD players and digital camcorders and cameras, has led to the need for high-performance system-level ICs with a high level of specific functionality. Although the Company's revenue from this market has not been significant, the Company now supplies ICs for sophisticated products used by consumers for computing, communications and entertainment applications, and believes that many of these applications will involve digital signal processing.

AUTOMOTIVE--Although the automotive market has historically been served with low-cost, low-performance ICs, demand has emerged for higher performance devices for a wide range of applications. In response, the Company is developing products specifically for the automotive market. The Company supplies a micromachined IC used as a crash sensor in airbag systems, which serves as an alternative to an electromechanical sensor. The Company believes that other micromachined devices derived from this product may be suitable for other automotive applications, such as roll-over sensing, Global Positioning Satellite (GPS) automotive navigation systems, anti-lock brakes and "smart" suspension systems and other applications including earthquake detectors and Microsoft high-end joysticks.

PRINCIPAL PRODUCTS

The Company's business predominantly comprises the design, manufacture and marketing of a broad line of high-performance linear, mixed-signal and digital integrated circuits that address a wide range of real-world signal processing applications. The Company's IC products include analog ICs, DSP ICs, micromachined products and assembled products.

A substantial portion of the Company's products are proprietary, while equivalents to other products are available from a limited number of other suppliers.

## INTEGRATED CIRCUITS (ICS)

### ANALOG ICS

Analog IC products have been the foundation of the Company's business for more than 20 years, and the Company believes it is one of the world's largest suppliers of analog ICs. Analog ICs sales represent approximately 75% of the Company's total sales. The Company's analog ICs are primarily high-performance, single-function devices. The majority of the Company's analog IC product revenue is attributable to sales of data converters (analog-to-digital and digital-to-analog) and amplifiers. Other analog IC products offered by the Company include analog signal-processing devices (such as analog multipliers), voltage references and comparators. Over the past few years the Company has been expanding its analog IC product offerings into product areas where its focus was previously limited, principally interface circuits and power management ICs. It is also expanding its analog IC product line to include a much larger number of products designed to operate from single-supply 3 or 5 volt power sources to better meet the needs of customers designing portable battery-operated equipment.

ADI's analog ICs products tend to be general purpose in nature, which allows customers to incorporate them in a wide variety of equipment and systems. ADI's product portfolio includes several hundred analog ICs, any one of which can have as many as several hundred customers. Analog ICs typically have long product life cycles. The Company's analog ICs customers include both OEMs and customers who build equipment for their own use. Historically, most analog ICs have been purchased by OEMs that serve the instrumentation, industrial and military/aerospace markets, but they are now also being used for applications in communications, computers, camcorders, scanners, automatic test equipment, imaging and other consumer applications requiring high-performance real-world signal processing. By using standard, high-performance, readily available, off-the-shelf components in their designs, ADI's customers can reduce the time required to develop and bring new products to market. Given the high cost of developing customized ICs, analog ICs usually provide the most cost-effective solutions for low to medium volume applications. In addition, combinations of analog ICs connected together on a printed circuit board can provide functionality not currently achievable using a single IC.

Other analog ICs include circuits that are designed to serve the needs of particularly demanding applications, e.g. very high speed analog timing and pin driver circuits needed by OEMs in the automatic test equipment business. Manufacturers of portable instrumentation need analog ICs designed to address demanding battery life requirements, and need similar kinds of functions available in analog IC products integrated into a single, very low power chip. Other principal requirements can include higher accuracy, lower cost per function, smaller size, lower weight, and fewer components for improved reliability. These application specific products allow ADI's customers to design smaller, lighter, higher performance, more power-efficient and lower-cost end products. The Company believes that these benefits have become more important to the Company's OEM customers as they increase their focus on high-performance, small, lightweight products, many of which are battery powered.

### DSP ICS

Analog's DSP ICs include general-purpose DSP ICs and multi-function mixed-signal devices that feature high levels of functional integration on a single chip. In the preceding three years, sales of these products represented between 18% and 23% of the Company's total sales.

The Company's general-purpose DSP ICs are designed to efficiently execute specialized programs (algorithms) associated with processing digitized real-time, real-world data. General-purpose DSP IC customers typically write their own algorithms using software tools provided by the Company and software tools obtained from third-party suppliers. All of these devices share a common architecture which allows system designers to address cost, performance and time-to-market constraints. ADI supports these products with specialized applications and easy-to-use, low-cost design tools, which reduce product development costs and time to market.

ADI's DSP ICs, other than its general-purpose DSPs, are multi-function mixed-signal devices, some of which include a DSP core. Examples of these devices include chipsets for communication applications (GSM cellular phones, remote access servers, data and fax modems), audio input/output devices for computer applications and devices designed to control motors.

## MICROMACHINED PRODUCTS

The Company's technology base includes a number of new products using an advanced IC technology known in the industry as surface micromachining. This technology enables extremely small mechanical structures to be built on the surface of a chip along with supporting circuitry. Specialized manufacturing processes in wafer fabrication, packaging and testing are required to produce these products.

The first series of micromachined products from ADI are accelerometers used in a wide variety of applications. The majority of current revenues from ADI's micromachined products derive from accelerometers used by automotive manufacturers in airbag applications. Emerging applications include GPS Automobile Navigation systems, earthquake detectors and Microsoft high-end joysticks. Sales of these products represent less than 5% of the Company's total sales.

## ASSEMBLED PRODUCTS

The Company's assembled products include multi-chip modules (MCMs), hybrids and printed circuit board modules. A MCM is a device made up of several IC chips assembled in an automated fashion in a multilayer package that provides high interconnect density at low cost. A hybrid consists of several chips and discrete components mounted and wired together on a substrate, which is then enclosed in a package. A printed-board module consists of surface-mount components assembled on a small printed board that is then encapsulated in a small plastic case.

Revenues from this product group have been declining for several years, primarily because hybrids are being replaced in many new designs with smaller, lower-cost monolithic ICs that offer higher levels of performance and integration at lower cost. Sales of these products have declined to less than 5% of the Company's total sales.

## RESEARCH AND DEVELOPMENT

The markets served by Analog are characterized by rapid technological changes and advances. Accordingly, the Company makes substantial investments in the design and development of new products and processes, and for significant improvement of existing products and processes. ADI spent $219 million during fiscal 1998 on the design, development and improvement of new and existing products and processes, compared to $196 million and $178 million during fiscal 1997 and 1996 respectively.

In support of its research and development activities, the Company employs hundreds of engineers involved in product and process development at several design centers and manufacturing sites located throughout the world.

As of October 31, 1998, the Company owned approximately 500 U.S. patents and had 175 patent applications on file with the United States patent office. The Company believes that while its patents may provide some advantage, its competitive position is largely determined by such factors as the knowledge, ability and experience of the Company's personnel, new product development, market recognition and ongoing marketing efforts, customer service and technical support.

## SALES CHANNELS

ADI sells its products in both North America and internationally through a direct sales force, third-party distributors and independent sales representatives. Approximately 50% of fiscal 1998 revenue was derived from customers in North America. As of December 1, 1998, the Company had 14 sales offices in the United States, and its third-party distribution channel consisted of six national and regional third-party distributors and several independent sales representatives at numerous locations throughout the U.S. and Canada.

Approximately 26% of the Company's fiscal 1998 revenue was derived from sales to customers in Europe; 13% to customers in Japan; and 11% to customers in other international markets. As of December 1, 1998, the Company had direct sales offices in Australia, Austria, China, Denmark, France, Germany, Hong Kong, India, Israel, Italy, Japan, Korea, the Netherlands, Singapore, Sweden, Taiwan and the United Kingdom. The Company also had sales representatives and/or distributors in approximately 40 countries outside North America, including countries where the Company also has direct sales offices. For further detail regarding geographic information, see Note 3 in the Notes to the Company's Consolidated Financial Statements incorporated herein by reference to the 1998 Annual Report to Shareholders and filed herewith as part of Exhibit 13.2.

Approximately 42% of ADI's fiscal 1998 revenue was derived from sales made through distributors. The Company's distributors typically maintain an inventory of Analog products. Some of these distributors also sell products competitive with the Company's products, including those for which the Company is an alternate source. Sales to certain distributors are made under agreements which provide protection to the distributors for their inventory of Company products against price reductions and products that are slow-moving or have been discontinued by the Company.

The Company's worldwide sales efforts are supported by an extensive promotional program that includes editorial coverage and paid advertising in trade publications; direct mail programs; promotional brochures; technical seminars and participation in trade shows. The Company publishes and distributes full-length databooks, short-form catalogs, applications guides, technical handbooks and detailed data sheets for individual products. The Company also provides products and application information via its worldwide web site on the Internet. The Company also maintains a staff of application engineers who aid customers in incorporating Analog's products into their products during their product development cycles.

For fiscal 1998, Analog's 20 largest customers accounted for approximately 30% of the Company's net sales. The largest single customer represented approximately 6% of net sales.

PRODUCTION AND RAW MATERIALS

Monolithic integrated circuit components are manufactured in a sequence of semiconductor production steps that include wafer fabrication, wafer testing, cutting the wafer into individual "chips" (or dice), assembly of the dice into packages and electrical testing of the devices in final packaged form. The raw materials used to manufacture these devices include silicon wafers, processing chemicals (including liquefied gases), precious metals, ceramic packages and plastic used for plastic packaging.

ADI employs a wide variety of Company-developed proprietary processes specifically tailored for use in fabricating high-performance linear and mixed-signal and system-level ICs. The Company also uses industry-standard bipolar and CMOS wafer fabrication processes.

ADI's IC products are fabricated both at the Company's production facilities and by third-party wafer fabricators. The Company relies primarily on its own facilities for fabricating wafers that require linear and mixed-signal processes. The Company operates wafer fabrication facilities in Wilmington and Cambridge, Massachusetts; Santa Clara and Sunnyvale, California; and Limerick, Ireland. The Company also operates assembly and test facilities located in the United States, Ireland, the Philippines and Taiwan and also uses third-party subcontractors. The Company uses Taiwan Semiconductor Manufacturing Company, (TSMC) and Chartered Semiconductor Manufacturing Pte., Ltd., (CSM) for the production of digital and VLSI mixed-signal devices. To provide access to advanced process technology at competitive costs, the Company has entered into a joint venture agreement (WaferTech, LLC) with TSMC, Altera, Integrated Silicon Solutions and several individual investors to build an eight-inch wafer fabrication facility in Camas, Washington. Subsequent to the year ended October 31, 1998, the Company concluded an agreement to sell 14% of its 18% equity ownership in WaferTech, for cash equal to the carrying value of the 14% equity ownership at October 31, 1998, to other WaferTech partners. This sale is expected to be completed by the end of the first quarter of fiscal 1999.

Hybrid products are manufactured by mounting and connecting together several integrated circuit chips in a single package. Some of the chips used in the Company's hybrids are manufactured by the Company and some are purchased from outside suppliers. The production process for modular components, subsystems and systems consists primarily of assembly, packaging and testing. Some of the Company's assembled products are assembled and tested within the Company's U.S. manufacturing facilities, while others are assembled and tested at Company-owned facilities outside the United States or by subcontractors, principally in the Far East.

To respond to production capacity requirements, the Company significantly expanded its manufacturing capacity during the last three years. Major wafer fabrication expansions have been completed in Wilmington and Cambridge, Massachusetts; Sunnyvale, California and Limerick, Ireland. In addition, the Company has completed construction of an additional assembly and test facility in Cavite, Philippines.

## BACKLOG

Backlog at the end of fiscal 1998 was approximately $174 million, down from approximately $280 million at the end of fiscal 1997. While backlog has declined primarily as a result of the lower level of demand for the Company's products from the year earlier period, it is also impacted by the tendency of its customers to rely on shorter lead times available from suppliers, including ADI, in periods of depressed demand. Additionally, the Company may allow customers to revise the quantities or delivery schedules of products ordered to reflect changes in their needs. As is customary in the semiconductor industry, in certain circumstances, the Company allows such orders to be canceled or deliveries delayed by customer without significant penalty. Accordingly, the Company believes that its backlog at any time should not be used as a measure of future revenues.

## GOVERNMENT CONTRACTS

The Company estimates that approximately 11% of its fiscal 1998 total worldwide revenue was attributable to sales to the U.S. government and government contractors and subcontractors. Analog's government contract related business is predominantly in the form of negotiated, firm fixed-price subcontracts. All such contracts and subcontracts contain standard provisions relating to termination at the election of the United States government.

## COMPETITION

ADI competes with a large number of semiconductor companies in markets that are highly competitive. The Company believes it is one of the largest suppliers of high-performance linear and mixed-signal signal-processing components. Competitors for the Company's linear and mixed-signal products include Burr-Brown Corp., Cirrus Logic Inc., Harris Corp., Linear Technology Corp., Maxim Integrated Products, Inc., National Semiconductor Corp., Sierra Semiconductor Corp., Siliconix Inc., Texas Instruments, Inc. and others.

ADI's competitors in the DSP IC market include Lucent Technologies Inc., Motorola Semiconductor Products and Texas Instruments, Inc.

Sales of the Company's micromachined products currently comprise acceleration sensors, and its main competitors are Bosch, Motorola and Denso. All three competitors use a hybrid (two chip) solution whereas ADI uses a single chip solution which the Company believes provides cost, reliability and functional advantages in the marketplace.

Many other companies offer components that compete with ADI's products; some also offer other electronic products, and some have financial resources substantially larger than ADI's. Also, some formerly independent competitors have been purchased by larger companies. However, to the Company's knowledge, no manufacturer competes with ADI across all of the product types offered by the Company in its signal-processing components product line.

The Company believes that competitive performance in the marketplace for real-world signal-processing components depends upon several factors, including product price, technical innovation, product quality and reliability, range of products, customer service and technical support. The Company believes its aggressive technical innovation emphasizing product performance and reliability, supported by its commitment to strong customer service and technical support, enables the Company to continue to compete successfully in its chosen markets against both foreign and domestic semiconductor manufacturers.

## ENVIRONMENT

Analog's manufacturing facilities are subject to numerous environmental laws and regulations, particularly with respect to industrial waste and emissions. Compliance with these laws and regulations has not had a material impact on the Company's capital expenditures, earnings or competitive position.

EMPLOYEES

As of October 31, 1998, the Company employed approximately 7,200 persons. The Company's future success depends in large part on the continued service of its key technical and senior management personnel, and on its ability to continue to attract, retain and motivate qualified employees, particularly those highly skilled design, process and test engineers involved in the manufacture of existing products and the development of new products and processes. The competition for such personnel is intense, and the loss of key employees could have a material adverse effect on the Company. The Company believes that relations with its employees are good.

ITEM 2. PROPERTIES

The Company's corporate headquarters is located in Norwood, Massachusetts. Manufacturing and other operations are conducted in several locations worldwide. The following tables provide certain information as to the Company's principal general offices and manufacturing facilities:

PLANT LOCATION

| OWNED: | USE | FLOOR SPACE |
|---|---|---|
| Wilmington, Massachusetts | Wafer fabrication, components assembly and testing, engineering and administrative offices | 265,200 sq. ft. |
| Wilmington, Massachusetts | Engineering, marketing and administrative offices | 108,000 sq. ft. |
| Wilmington, Massachusetts | Components engineering, marketing and administrative offices | 65,500 sq. ft. |
| Westwood, Massachusetts | Components and subsystems assembly and testing, engineering and administrative offices | 100,500 sq. ft. |
| Limerick, Ireland | Wafer fabrication, wafer probe and testing, engineering and administrative offices | 315,400 sq. ft. |
| Greensboro, North Carolina | Components and board assembly and testing, engineering and administrative offices | 122,600 sq. ft. |
| Cavite, Philippines | Components assembly and testing, engineering and administrative offices | 168,300 sq. ft. |
| Manila, Philippines | Components assembly and testing, engineering and administrative offices | 75,300 sq. ft. |

| PRINCIPAL PROPERTIES LEASED: | USE | FLOOR SPACE | LEASE EXPIRATION (FISCAL YEAR) | RENEWALS |
|---|---|---|---|---|
| Norwood, Massachusetts | Corporate headquarters, engineering, components testing, sales and marketing offices | 129,900 sq. ft. | 2007 | 3, five-yr. periods |
| Cambridge, Massachusetts | Wafer fabrication, components testing and assembly engineering, marketing administrative offices | 116,000 sq. ft. | 2001 | 2, five-yr. periods |
| Santa Clara, California | Wafer fabrication, components assembly and testing, engineering and administrative offices | 72,800 sq. ft. | 2002 | 3, five-yr. periods |
| Santa Clara, California | Administrative offices and engineering | 43,500 sq. ft. | 2002 | 3, five-yr. periods |
| Sunnyvale, California | Wafer fabrication | 38,700 sq. ft. | 2000 | 3, five-yr. periods |
| Taipei, Taiwan | Components testing, engineering and administrative offices | 45,700 sq. ft. | 2001 | 1, five to seven yr. period |

ITEM 2. PROPERTIES -- (CONTINUED)

In addition to the principal leased properties listed in the previous table, the Company also leases sales offices and other premises at 28 locations in the United States and 37 locations overseas under operating lease agreements. These leases expire at various dates through the year 2030. The Company anticipates no difficulty in retaining occupancy of any of its manufacturing, office or sales facilities through lease renewals prior to expiration or through month-to-month occupancy, or in replacing them with equivalent facilities. For information concerning the Company's obligations under all operating and capital leases see Note 10 in the Notes to the Company's Consolidated Financial Statements incorporated herein by reference to the 1998 Annual Report to Shareholders and filed herewith as part of Exhibit 13.2.

ITEM 3. LEGAL PROCEEDINGS

The information required by this item is set forth in Note 11 in the Notes to the Company's Consolidated Financial Statements incorporated herein by reference to the 1998 Annual Report to Shareholders and filed herewith as part of Exhibit 13.2.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of the Company's security holders during the last quarter of the fiscal year ended October 31, 1998.

## EXECUTIVE OFFICERS OF THE COMPANY

The following table sets forth (i) the name and age of each present executive officer of the Company; (ii) the position(s) presently held by each person named; and (iii) the principal occupations held by each person named for at least the past five years.

| EXECUTIVE OFFICER | AGE | POSITION | BUSINESS EXPERIENCE |
| --- | --- | --- | --- |
| Ray Stata.................. | 64 | Chairman of the Board | Chairman, of the Board since 1973; Chief Executive Officer from 1973 to November 1996; President from 1971 to November 1991. |
| Jerald G. Fishman.......... | 53 | President, Chief Executive Officer, and Director | Chief Executive Officer since November 1996; President and Director since November 1991; Executive Vice President from 1988 to November 1991; Group Vice President - Components from 1982 to 1988. |
| Ross Brown................. | 54 | Vice President, Human Resources | Vice President, Human Resources since May 1993; U.S. Personnel Manager for Digital Equipment Corp. from 1990 to 1993; Senior Group Personnel Manager at Digital from 1986 to 1990. |
| Samuel H. Fuller........... | 52 | Vice President, Research and Development | Vice President, Research and Development since March 1998; Vice President of Research and Chief Scientist of Digital Equipment Corp. from 1983 to 1998. |
| Russell K. Johnsen......... | 44 | Vice President and General Manager, Communications Division | Vice President and General Manager, Communications Division since May 1994; Vice President and General Manager, Analog Devices Semiconductor Division from November 1993 to May 1994; General Manager of the Wide Area Networks Division of National Semiconductor Corp. from 1992 to 1993. |
| Robert R. Marshall......... | 44 | Vice President, Worldwide Manufacturing | Vice President, Worldwide Manufacturing since February 1994; Vice President, Manufacturing, Limerick Site, Analog Devices, B.V. - Limerick, Ireland from November 1991 to February 1994; Plant Manager, Analog Devices, B.V. - Limerick, Ireland from January 1991 to November 1991. |

| EXECUTIVE OFFICER | AGE | POSITION | BUSINESS EXPERIENCE |
| --- | --- | --- | --- |
| William A. Martin .......... | 39 | Treasurer | Treasurer since March 1993; Assistant Treasurer from October 1991 to March 1993; Manager of Treasury Finance from March 1987 to October 1991; Manager of International Treasury from October 1985 to March 1987. |
| Robert McAdam .............. | 48 | Vice President and General Manager, Standard Linear Products Division | Vice President and General Manager, Standard Linear Products Division since February 1994; Vice President and General Manager, Analog Devices, B.V. - Limerick, Ireland from January 1991 to February 1994; Product Line Manager, Analog Devices, B.V. - Limerick, Ireland from October 1988 to January 1991. |
| Brian P. McAloon ........... | 48 | Vice President, Sales | Vice President, Sales since May 1992; Vice President, Sales and Marketing - Europe and Southeast Asia from 1990 to 1992; General Manager, Analog Devices, B.V. - Limerick, Ireland from 1987 to 1990. |
| Joseph E. McDonough ........ | 51 | Vice President, Finance and Chief Financial Officer | Vice President, Finance and Chief Financial Officer since November 1991; Vice President since 1988 and Treasurer from 1985 to March 1993; Director of Taxes from 1983 to 1985. |
| H. Goodloe Suttler ......... | 47 | Vice President, Marketing, Quality and Planning | Vice President, Marketing, Quality and Planning since October 1993; Vice President and General Manager, Analog Devices Semiconductor Division from November 1991 to October 1993; General Manager of Analog Devices Semiconductor Division from August 1988 to November 1991. |
| Franklin Weigold ........... | 59 | Vice President and General Manager, Transportation and Industrial Products Division | Vice President and General Manager, Transportation and Industrial Products Division since March 1992; President and Chief Operating Officer of Unitrode from June 1990 to March 1992. |

There is no family relationship among the named officers.

PART II

## ITEM 5. MARKET FOR REGISTRANT'S COMMON STOCK AND RELATED STOCKHOLDER MATTERS

The Company's Common Stock is listed on the New York Stock Exchange ("NYSE") under the symbol ADI. The table below sets forth the NYSE high and low sale prices of the Common Stock during the two most recent fiscal years.

| | FISCAL 1998 | | FISCAL 1997 | |
|---|---|---|---|---|
| PERIOD | HIGH | LOW | HIGH | LOW |
| First Quarter | $33.56 | $23.75 | $29.25 | $19.63 |
| Second Quarter | $39.63 | $27.13 | $29.25 | $21.00 |
| Third Quarter | $39.00 | $21.44 | $33.75 | $23.88 |
| Fourth Quarter | $24.38 | $12.00 | $36.69 | $26.00 |

The Company's $60,000,000 credit agreement restricts the aggregate of all cash dividend payments declared or made subsequent to November 2, 1996 to an amount not exceeding $150,000,000 plus 50% of the consolidated net income of the Company for the period from November 3, 1996 through the end of the Company's then most recent fiscal quarter. At October 31, 1998 this amount was equal to $280,314,000. The Company has never paid any cash dividends on its Common Stock and currently has no intentions to do so.

The approximate number of holders of record of the Company's Common Stock at December 31, 1998 was 6,100. This number does not include shareholders for whom shares are held in a "nominee" or "street" name.

## ITEM 6. SELECTED FINANCIAL DATA

| (thousands except per share amounts) | 1998 | 1997 | 1996 | 1995 | 1994 |
|---|---|---|---|---|---|
| Statement of Operations data: | | | | | |
| Net sales | $1,230,571 | $1,243,494 | $1,193,786 | $941,546 | $773,474 |
| Net income before cumulative effect of change in accounting principle | 119,488 | - | - | - | - |
| Cumulative effect of change in accounting principle | 37,080 | - | - | - | - |
| Net income after cumulative effective of change in accounting principle | 82,408 | 178,219 | 171,901 | 119,270 | 74,496 |
| Net income per share: | | | | | |
| Basic | 0.51 | 1.13 | 1.12 | 0.79 | 0.51 |
| Diluted | 0.50 | 1.04 | 1.03 | 0.75 | 0.48 |
| Pro forma amounts with the change in accounting principle related to revenue recognition applied retroactively: | | | | | |
| Net sales | $1,230,571 | $1,214,602 | $1,183,186 | * | * |
| Net income | 119,488 | 167,515 | 168,328 | * | * |
| Net income per share: | | | | | |
| Basic | 0.74 | 1.06 | 1.10 | * | * |
| Diluted | 0.71 | 0.98 | 1.01 | * | * |
| Balance Sheet data: | | | | | |
| Total assets | $1,861,730 | $1,763,853 | $1,508,272 | $993,349 | $813,088 |
| Long-term debt and non-current obligations under capital leases | 340,758 | 348,852 | 353,666 | 80,000 | 80,061 |

* Data was not available in sufficient detail to provide pro forma information for these years

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The information required by this item is incorporated herein by reference to the "Management Analysis" set forth on pages 1 through 8 of the 1998 Annual Report to Shareholders and is filed herewith as part of Exhibit 13.1.

ITEM 7A. QUALITATIVE AND QUANTITATIVE DISCLOSURES ABOUT MARKET RISK

The information required by this item is incorporated herein by reference to the "Management Analysis" set forth on pages 1 through 8 of the 1998 Annual Report to Shareholders and is filed herewith as part of Exhibit 13.1.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this item is incorporated herein by reference to the Company's 1998 Annual Report to Shareholders under the headings "Financial Section - Consolidated Statements of Income, - Consolidated Balance Sheets, - Consolidated Statements of Stockholders' Equity, - Consolidated Statements of Cash Flows, - Notes to Consolidated Financial Statements, - Report of Ernst & Young LLP, Independent Auditors and - Supplementary Financial Information," and is filed herewith as Exhibit 13.2.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The response to this item is contained in part under the caption "EXECUTIVE OFFICERS OF THE COMPANY" in Part I hereof, and the remainder is contained in the Company's Proxy Statement for the Annual Meeting of Stockholders to be held on March 9, 1999 (the "1999 Proxy Statement") under the caption "Election of Directors" and is incorporated herein by reference. Information relating to a delinquent filing of a Form 4 by an Executive Officer of the Company is contained in the Company's 1999 Proxy Statement under the caption "Beneficial Ownership Reporting Compliance."

ITEM 11. EXECUTIVE COMPENSATION

The response to this item is contained in the Company's 1999 Proxy Statement under the captions "Directors' Compensation," "Executive Compensation," and "Severance and Other Agreements," and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The response to this item is contained in the Company's 1999 Proxy Statement under the caption "Security Ownership of Certain Beneficial Owners and Management" and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The response to this item is contained in the Company's 1999 Proxy Statement under the caption "Transactions with Related Parties," and is incorporated herein by reference.

# PART IV

## ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K

### (a) 1. FINANCIAL STATEMENTS

The following consolidated financial statements are included in the Company's 1998 Annual Report to Shareholders and are incorporated herein by reference pursuant to Item 8:

- Consolidated Statements of Income for the years ended October 31, 1998, November 1, 1997 and
- November 2, 1996
- Consolidated Balance Sheets as of October 31, 1998 and November 1, 1997
- Consolidated Statements of Stockholders' Equity for the years ended October 31, 1998, November 1, 1997 and November 2, 1996
- Consolidated Statements of Cash Flows for the years ended October 31, 1998, November 1, 1997 and November 2, 1996

### (a) 2. FINANCIAL STATEMENT SCHEDULES

The following consolidated financial statement schedule is included in Item 14(d):

Schedule II - Valuation and Qualifying Accounts

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

### (a) 3. LISTING OF EXHIBITS

| EXHIBIT NO. | DESCRIPTION |
|---|---|
| 3.1 | Restated Articles of Organization of Analog Devices, Inc., as amended, filed as an exhibit to the Company's Form S-8 (File No. 333-04821) filed on May 30, 1996 regarding the Company's amended 1988 Stock Option Plan, and incorporated herein by reference. |
| 3.2 | By-laws of Analog Devices, Inc. as amended, filed as an exhibit to the Company's Form 10-K for the fiscal year ended November 1, 1997 and incorporated herein by reference. |
| 4.1 | Rights Agreement, as amended, between Analog Devices, Inc. and The First National Bank of Boston, as Rights Agent, filed as an exhibit to a Form 8 filed on June 27, 1989 amending the Registration Statement on Form 8-A relating to Common Stock Purchase Rights, and incorporated herein by reference. |
| 4.2 | Indenture dated as of March 1, 1993 between Analog Devices, Inc. and The First National Bank of Boston, filed as an exhibit to the Company's Form 10-K for the fiscal year ended October 29, 1994 and incorporated herein by reference. |
| 4.3 | Indenture dated as of December 18, 1995 between Analog Devices, Inc. and State Street Bank and Trust Company, as Trustee, filed as an exhibit to the Company's Form 10-K for the fiscal year ended October 28, 1995 and incorporated herein by reference. |
| * 4.4 | Analog Devices, Inc. Deferred Compensation Plan, filed as an exhibit to a Form S-8 filed on December 8, 1995 and incorporated herein by reference, as amended by Amendment No. 1 and Amendment No. 2, filed as Exhibits to Post-Effective Amendment No. 1 to Form S-8 filed on April 15, 1997, and Amendment No. 3, filed as an Exhibit to Post-Effective Amendment No. 2 to form S-8 filed on November 12, 1997. |

| EXHIBIT NO. | DESCRIPTION |
| --- | --- |
| 4.5 | Rights Agreement, dated as of March 18, 1998 between Analog Devices Inc. and BankBoston, N.A., as Rights agent, filed as and exhibit and incorporated herein by reference to Analog Devices Inc.'s Registration Statement of Form 8-A (File No. 011-07819) filed on March 19, 1998. |
| * 10.1 | Bonus Plan of Analog Devices, Inc., filed as an exhibit to the Company's Form 10-K for the fiscal year ended November 1, 1997 and incorporated herein by reference |
| * 10.2 | 1991 Restricted Stock Plan of Analog Devices, Inc., filed as an exhibit to the Company's Form 10-K for the fiscal year ended November 1, 1997 and incorporated herein by reference |
| * 10.3 | 1998 Stock Option Plan of Analog Devices, Inc., filed on February 6, 1998 as an appendix to the Company's Definitive Proxy Statement on Schedule 14A and incorporated herein by reference. |
| * 10.4 | Restated 1988 Stock Option Plan of Analog Devices, Inc., filed as an exhibit to the Company's Form 10-Q for the fiscal quarter ended May 3, 1997 and incorporated herein by reference. |
| * 10.5 | 1989 Director Stock Option Plan of Analog Devices, Inc., as amended, filed as an exhibit to the Company's Form 10-K for the fiscal year ended November 2, 1996 and incorporated herein by reference. |
| * 10.6 | 1992 Director Option Plan of Analog Devices, Inc., filed as an exhibit to the Company's Form 10-K for the fiscal year ended November 1, 1997 and incorporated herein by reference |
| * 10.7 | 1994 Director Option Plan of Analog Devices, Inc., as amended, filed as an exhibit to the Company's Form 10-Q for the fiscal quarter ended February 1, 1997 and incorporated herein by reference, as amended by Amendment No. 2, filed as an exhibit to the Company's Form S-8 (File No. 333-47789), filed on March 11, 1998 and incorporated herein by reference. |
| 10.8 | Amended and restated lease agreement dated May 1, 1992 between Analog Devices, Inc. and the trustees of Everett Street Trust relating to the premises at 3 Technology Way, Norwood, Massachusetts, filed as an exhibit to the Company's Form 10-K for the fiscal year ended November 1, 1997 and incorporated herein by reference. |
| 10.9 | Guaranty dated as of May 1, 1994 between Analog Devices, Inc. and Metropolitan Life Insurance Company relating to the premises at 3 Technology Way, Norwood, Massachusetts, filed as an exhibit to the Company's Form 10-Q for the fiscal quarter ended April 30, 1994 and incorporated herein by reference. |
| 10.10 | Letter Agreement dated as of May 18, 1994 between Analog Devices, Inc. and Metropolitan Life Insurance Company relating to the premises at 3 Technology Way, Norwood, Massachusetts, filed as an exhibit to the Company's Form 10-Q for the fiscal quarter ended April 30, 1994 and incorporated herein by reference. |
| 10.11 | Reimbursement Agreement dated May 18, 1992 between Analog Devices, Inc. and the trustees of Everett Street Trust, filed as an exhibit to the Company's Form 10-K for the fiscal year ended November 1, 1997 and incorporated herein by reference. |
| 10.12 | Lease agreement dated August 8, 1990 between Precision Monolithics, Inc. and Bourns, Inc. relating to the premises at 1525 Comstock Road, Santa Clara, California, filed as an exhibit to the Company's Form 10-K for the fiscal year ended November 2, 1996 and incorporated herein by reference. |
| 10.13 | Lease amendment dated May 1, 1996 to the Lease Agreement dated August 8, 1990 between Analog Devices, Inc. and Bourns, Inc., relating to premises located at 1525 Comstock Road, Santa Clara, California, filed as an exhibit to the Company's Form 10-Q for the fiscal quarter ended May 4, 1996 and incorporated herein by reference. |

| EXHIBIT NO. | DESCRIPTION |
|---|---|
| 10.14 | Lease agreement dated August 8, 1990, as amended, between Precision Monolithics, Inc. and Bourns, Inc. relating to the premises at 1500 Space Park Drive, Santa Clara, California, filed as an exhibit to the Company's Form 10-K for the fiscal year ended November 2, 1996 and incorporated herein by reference. |
| 10.15 | Lease amendment dated May 1, 1996 to the Lease Agreement dated August 8, 1990 between Analog Devices, Inc. and Bourns, Inc., relating to premises located at 1500 Space Park Drive, Santa Clara, California, filed as an exhibit to the Company's Form 10-Q for the fiscal quarter ended May 4, 1996 and incorporated herein by reference. |
| 10.16 | Credit Agreement dated as of March 12, 1993 among Analog Devices, Inc. and Morgan Guaranty Trust Company of New York, Bank of America National Trust and Savings Association, Continental Bank, N.A., The First National Bank of Boston and Morgan Guaranty Trust Company of New York, as Agent, filed as an exhibit to the Company's Form 10-Q for the fiscal quarter ended May 1, 1993 and incorporated herein by reference. |
| 10.17 | Amendment No. 1 dated as of May 18, 1993 to the Company's Credit Agreement dated March 12, 1993, filed as an exhibit to the Company's Form 10-Q for the fiscal quarter ended July 31, 1993 and incorporated herein by reference. |
| 10.18 | Amendment No. 2 dated as of September 8, 1994 to the Company's Credit Agreement dated March 12, 1993, filed as an exhibit to the Company's Form 10-K for the fiscal year ended October 29, 1994 and incorporated herein by reference. |
| 10.19 | Amendment No. 3 dated as of October 25, 1996 to the Company's Credit Agreement dated March 12, 1993, filed as an exhibit to the Company's Form 10-K for the fiscal year ended November 2, 1996 and incorporated herein by reference. |
| * 10.20 | Form of Employee Retention Agreement, as amended, filed as an exhibit to the Company's Form 10-K for the fiscal year ended November 1, 1997 and incorporated herein by reference. |
| * 10.21 | Employee Change in Control Severance Policy of Analog Devices, Inc., as amended, filed as an exhibit to the Company's 10-K for the fiscal year ended October 30, 1993 and incorporated herein by reference. |
| * 10.22 | Senior Management Change in Control Severance Policy of Analog Devices, Inc., as amended, filed as an exhibit to the Company's 10-K for the fiscal year ended October 30, 1993 and incorporated herein by reference. |
| * 10.23 | Description of Consulting Arrangement between Analog Devices, Inc. and John L. Doyle, filed as an exhibit to the Company's Form 10-K for the fiscal year ended November 2, 1996 and incorporated herein by reference. |
| * 10.24 | Letter agreement between Analog Devices, Inc. and Jerald G. Fishman dated December 15, 1994 relating to acceleration of stock options and restricted stock awards upon termination of employment, filed as an exhibit to the Company's Form 10-K for the fiscal year ended October 29, 1994 and incorporated herein by reference. |
| ** 10.25 | Option Agreement dated as of May 16, 1995 between Analog Devices B.V. and Taiwan Semiconductor Manufacturing Company, Ltd., filed as an exhibit to the Company's Form 10-Q for the fiscal quarter ended July 29, 1995 and incorporated herein by reference. |
| ** 10.26 | Wafer Production Agreement dated as of May 16, 1995 between Taiwan Semiconductor Manufacturing Company, Ltd. and Analog Devices B.V., filed as an exhibit to the Company's Form 10-Q for the fiscal quarter ended July 29, 1995 and incorporated herein by reference. |

| EXHIBIT NO. | DESCRIPTION |
| --- | --- |
| 10.27 | Lease Agreement dated June 16, 1995 between Analog Devices, Inc. and Ferrari Brothers, relating to the premises at 610 Weddell Drive, Sunnyvale, California, filed as an exhibit to the Company's Form 10-K for the fiscal year ended November 2, 1996 and incorporated herein by reference. |
| 10.28 | Lease amendment dated March 1, 1996 to the Lease Agreement dated June 16, 1995 between Analog Devices, Inc. and Ferrari Brothers, relating to premises located at 610 Weddell Drive, Sunnyvale, California, filed as an exhibit to the Company's Form 10-Q for the fiscal quarter ended May 4, 1996 and incorporated herein by reference. |
| ** 10.29 | Manufacturing Agreement dated as of March 17, 1995 between Chartered Semiconductor Manufacturing Pte. Ltd. and Analog Devices B.V., filed as an exhibit to the Company's Form 10-Q for the fiscal quarter ended February 3, 1996 and incorporated herein by reference. |
| ** 10.30 | Deposit Agreement dated January 30, 1996 between Chartered Semiconductor Manufacturing Pte. Ltd. and Analog Devices B.V., filed as an exhibit to the Company's Form 10-Q for the fiscal quarter ended February 3, 1996 and incorporated herein by reference. |
| 10.31 | Lease Agreement dated February 8, 1996 between Analog Devices, Inc. and Massachusetts Institute of Technology, relating to premises located at 21 Osborn Street, Cambridge, Massachusetts, filed as an exhibit to the Company's Form 10-Q for the fiscal quarter ended February 3, 1996 and incorporated herein by reference. |
| ** 10.32 | Amended and Restated Limited Liability Company Agreement of WaferTech, LLC, a Delaware limited liability company, dated as of August 9, 1996. Filed as Exhibit 10.47 to the Form 10-Q of Altera Corporation (File No. 0-16617) for the fiscal quarter ended June 30, 1996, and incorporated herein by reference. |
| ** 10.33 | Purchase Agreement by and between Taiwan Semiconductor Manufacturing Co., Ltd., as seller and Analog Devices, Inc., Altera Corporation and Integrated Silicon Solutions, Inc., as buyers dated as of June 25, 1996. Filed as Exhibit 10.48 to the Form 10-Q of Altera Corporation (File No. 0-16617) for the fiscal quarter ended June 30, 1996, and incorporated herein by reference. |
| * 10.34 | Trust Agreement for Deferred Compensation Plan, filed as an exhibit to the Company's Post Effective Amendment No. 2 to Form S-3 filed November 12, 1997 and incorporated herein by reference. |
| 10.35 | Lease agreement dated September 19, 1996 between Ren Min Company Limited and Analog Devices Taiwan, Limited relating to the premises at Five-Kung-Five Road, Taipei, Taiwan, filed as an exhibit to the Company's Form 10-K for the fiscal year ended November 1, 1997 and incorporated herein by reference. |
| + 13.1 | Management Analysis corresponding to pages 1 through 8 of the 1998 Annual Report to Shareholders for the fiscal year ended October 31, 1998. |
| + 13.2 | Financial Statements and Notes thereto, Report of Ernst & Young LLP, Independent Auditors and Supplementary Financial Information, corresponding to pages 9 through 33 of the 1998 Annual Report to Shareholders, for the fiscal year ended October 31, 1998. |
| + 18 | Letter from Ernst & Young, LLP re: Change in Accounting Principle |
| + 21 | Subsidiaries of the Company. |
| + 23 | Consent of Ernst & Young LLP. |

27 Financial Data Schedule.

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* Management contracts and compensatory plan or arrangements required to be filed as an Exhibit pursuant to Item 14(c) of Form 10-K.

** Confidential treatment has been granted as to certain portions of these Exhibits.

\+ Filed herewith.

(b) REPORTS ON FORM 8-K

The Company filed no reports on Form 8-K with the Securities and Exchange Commission during the fiscal quarter ended October 31, 1998.

SIGNATURES

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

ANALOG DEVICES, INC.
(Registrant)

| | |
|---|---|
| By: /s/ Jerald G. Fishman | By: /s/ Joseph E. McDonough |
| Jerald G. Fishman<br>President<br>Chief Executive Officer<br>and Director<br>(Principal Executive Officer) | Joseph E. McDonough<br>Vice President-Finance<br>and Chief Financial Officer<br>(Principal Financial and<br>Accounting Officer) |
| Date: January 28, 1999 | Date: January 28, 1999 |

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

| NAME | TITLE | DATE |
|---|---|---|
| /s/ Ray Stata<br>Ray Stata | Chairman of the Board | January 28, 1999 |
| /s/ Jerald G. Fishman<br>Jerald G. Fishman | President,<br>Chief Executive Officer<br>and Director | January 28, 1999 |
| /s/ John L. Doyle<br>John L. Doyle | Director | January 28, 1999 |
| /s/ Charles O. Holliday<br>Charles O. Holliday | Director | January 28, 1999 |
| /s/ Joel Moses<br>Joel Moses | Director | January 28, 1999 |
| /s/ F. Grant Saviers<br>F. Grant Saviers | Director | January 28, 1999 |
| /s/ Lester C. Thurow<br>Lester C. Thurow | Director | January 28, 1999 |

ANALOG DEVICES, INC.

ANNUAL REPORT ON FORM 10-K

YEAR ENDED OCTOBER 31, 1998

ITEM 14(d)

FINANCIAL STATEMENT SCHEDULE

ANALOG DEVICES, INC.
SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS

YEARS ENDED OCTOBER 31, 1998, NOVEMBER 1, 1997 AND NOVEMBER 2, 1996
(THOUSANDS)

| DESCRIPTION | BALANCE AT BEGINNING OF PERIOD | ADDITION CHARGED TO INCOME STATEMENT | DEDUCTIONS | BALANCE AT END OF PERIOD |
|---|---|---|---|---|
| ACCOUNTS RECEIVABLE RESERVES AND ALLOWANCES: | | | | |
| Year ended November 2, 1996 | $12,738 | $ 2,611 | $ 564 | $14.785 |
| Year ended November 1, 1997 | $14,785 | $25,456 | $ 234 | $40,007 |
| Year ended October 31, 1998 | $40,007 | $ 3,023 | $10,698* | $32,332 |

* Amount reflects reclassification of certain reserves from accounts receivable to accrued liabilities made in connection with the Company's accounting change (see Notes 2(l) and 4 to the consolidated financial statements).

# MANAGEMENT ANALYSIS

## COMPANY OVERVIEW

Analog Devices, Inc. (Analog, ADI or the Company) is a semiconductor company that designs, manufactures and markets precision high-performance integrated circuits (ICs) used in analog and digital signal processing (DSP). Virtually all of ADI's products are components, which are typically incorporated by original equipment manufacturers (OEMs) in a wide range of equipment and systems for use in communications, computer, industrial, instrumentation, military/aerospace, automotive and high-performance consumer electronics applications.

The Company's principal products include general-purpose, standard-function analog and mixed-signal ICs and DSP ICs. DSP ICs include general-purpose digital signal processing ICs and application-specific devices that typically incorporate analog and mixed-signal circuitry and a DSP core.

The Company sells its products worldwide through a direct sales force, third-party industrial distributors and independent sales representatives. Approximately 50% of fiscal 1998 revenue was derived from customers in North America, while most of the balance was derived from customers in Western Europe and the Far East.

## RESULTS OF OPERATIONS

Sales were $1,231 million in fiscal 1998, $1,243 million in fiscal 1997 and $1,194 million in fiscal 1996. Demand in fiscal 1998 started off strong and declined in the second half of the year, due to a cyclical downturn in the semiconductor industry. As a result, sales in 1998 declined 1% from the prior year. However, excluding sales from the disk drive IC business, which was disposed of early in 1998, sales increased by 3% year on year.

Sales of analog IC products increased 5% during fiscal 1998 and 8% during fiscal 1997. The majority of the analog IC product revenue increase in both of these years was attributable to the increasing use of analog ICs in the growing communications, computer and computer peripherals markets, offset by a decline in revenue in industrial markets. Analog IC revenue represented between 70% and 75% of the Company's total revenue during fiscal 1998, 1997 and 1996.

DSP IC product sales declined 7% during fiscal 1998, primarily due to a decline in sales of Global System for Mobile Communications (GSM) cellular phone chipsets. Excluding the impact of the reduction of GSM revenue, DSP IC revenue increased 32% in fiscal 1998. In fiscal 1997, DSP IC revenue declined 13% primarily as a result of a decline in sales of computer audio products, GSM chipsets and products used in automatic test equipment. DSP IC revenue was between 18% and 23% of the Company's total revenue during fiscal 1998, 1997 and 1996.

Sales of micromachined products represented less than 5% of the Company's revenue in fiscal 1998, 1997 and 1996.

Sales of assembled products declined from 5% in fiscal 1996 to less than 5% of the Company's total revenue during fiscal 1998 and fiscal 1997. Assembled products include multi-chip modules, hybrids and printed circuit board modules.

In fiscal 1998, sales to North American customers increased significantly over fiscal 1997, principally as a result of increased sales of analog IC products. Sales in Europe declined from the prior year as GSM sales declined. Sales in Japan remained essentially flat in comparison to the prior year. Sales declined in other Southeast Asian countries, primarily due to the decline in sales of disk drive IC products (as a result of the sale of that business in early 1998), offset by increases in the sales of analog IC products.

Sales in North America increased from fiscal 1996 to fiscal 1997 as a result of an increase in sales of analog IC products. Sales in Europe and Japan remained essentially flat from fiscal 1996 to fiscal 1997. Sales declines in Southeast Asia (SEA) from fiscal 1996 to fiscal 1997 were the result of a decline in computer audio sales partially offset by an increase in sales of analog IC products in the region.

Gross margin declined to 47.8% of sales in fiscal 1998, from 49.9% in fiscal 1997. This decline was principally due to a reduction in demand in 1998, which caused the Company to reduce production rates, particularly in the second half of the year. The gross margin ratio in fiscal 1997 remained essentially flat in comparison to fiscal 1996. It is anticipated that gross margin will be adversely impacted by lower production rates until sales growth resumes.

Research and development (R&D) expenses increased approximately 12% in fiscal 1998 to $219 million, or 17.8% of sales. This increase was due to the continued development of innovative products and processes and higher spending in the development of new products and technologies targeted for the communications, computer and automotive markets, including initiatives in general-purpose digital signal processing, ICs for modem and wireless communications applications, RF signal processing, broadband wired communications, micromachining technology and accelerometer products. The Company believes that a continued commitment to research and development is essential in order to maintain product leadership in its existing products and to provide innovative new product offerings, and therefore expects to continue to make significant investments in research and development in the future. However, because of the decline in demand in the second half of fiscal 1998, the Company decided to curtail further increases in R&D spending. In fiscal 1997, R&D expenses increased 10% to $196 million or 15.8% of sales, up from 14.9% in fiscal 1996.

Selling, marketing, general and administrative (SMG&A) expenses were $207 million in fiscal 1998, an increase of $15 million from the $192 million recorded in the prior year. This increase was primarily attributable to a $6 million charge related to the realignment of the Company's sales and distribution organizations, and an $8 million charge related to collection difficulties the Company experienced with customers whose business and financing had been adversely affected by the Southeast Asian economic situation. As a result, SMG&A expense as a percentage of sales increased from 15.4% in fiscal 1997 to 16.9% in fiscal 1998. In fiscal 1997, SMG&A expenses decreased by $4 million from the $196 million incurred in fiscal 1996 and represented 15.4 % of sales, down from 16.4% in fiscal 1996.

During fiscal 1998, the Company completed the sale of its disk drive IC business to Adaptec, Inc. The Company received approximately $27 million in cash for the disk drive product line and, after providing for the write-off of inventory, fixed assets and other costs incurred to complete the transaction, recorded a net gain of approximately $13 million. The Company also entered into other arrangements with Adaptec that provide for payments to the Company aggregating $13 million, of which $10 million was earned in fiscal 1998, for assisting Adaptec in research and development efforts.

The Company recorded a restructuring charge of $17 million during the third quarter of fiscal 1998. Of this charge, $7 million related to a worldwide workforce reduction of approximately 350 employees, which was completed during the fourth quarter of fiscal 1998, in the manufacturing, selling and general and administrative areas. This action is expected to result in annual savings of approximately $10 million. In addition, the Company performed a review of its business strategy and concluded that the key to success in the DSP market is to focus on opportunities in the general-purpose DSP market that can provide consistent growth, while at the same time being more selective in pursuing vertical market DSP opportunities. As a result of this review, the Company scaled back its efforts in some of the higher volume, lower margin, shorter life cycle product areas and wrote off $10 million, which was the carrying value of specific assets associated with these businesses.

Including the impact of both the restructuring charge and the net gain on the sale of the disk drive IC business, the Company's operating income was 12.8% of sales for fiscal 1998, compared to 18.8% for fiscal 1997. The Company's operating income was 19.0% of sales for fiscal 1996.

The Company's equity interest in the WaferTech facility resulted in a loss of $9.8 million in fiscal 1998, compared to income of $0.2 million in fiscal 1997. This change was a result of increased costs incurred by WaferTech as they ramped up their facility during fiscal 1998.

Due to a shift in the mix of worldwide income and the utilization of $5.6 million capital loss carryforwards for tax purposes, the effective income tax rate decreased to 20.6% in fiscal 1998, from 24.4% in fiscal 1997. Accordingly, the Company's valuation allowance was reduced from $5.6 million at November 1, 1997 to $0 at October 31, 1998.

In the fourth quarter of fiscal 1998, the Company changed its accounting method for recognizing revenue on all shipments to international distributors and certain shipments to domestic distributors. The change was made with an effective date of November 2, 1997 (the beginning of fiscal 1998). While the Company has historically deferred revenue on most shipments made to domestic distributors until the products were resold by the distributors to end users, it recognized revenue on shipments to international distributors and certain shipments to domestic distributors upon shipment to the distributors, net of appropriate reserves for returns and allowances. As a result of this accounting change, revenue recognition on shipments to distributors worldwide will be deferred until the products are resold to the end users. The Company believes that deferral of revenue on shipments to distributors and related gross margin until the product is shipped by the distributors is a more meaningful measurement of results of operations because it better conforms to the substance of the transaction considering the changing business environment in the international marketplace; is consistent with industry practice; and will, accordingly, better focus the entire organization on sales to end users and, therefore, is a preferable method of accounting. The cumulative effect in prior years of the change in accounting principle was a charge of approximately $37 million (net of $20 million of income taxes) or $0.21 per diluted share.

Net income before the cumulative effect of the change in accounting principle decreased 33% to $119 million and diluted earnings per share was $0.71 for fiscal 1998. Net income after the cumulative effect of the change in accounting principle decreased 54% to $82 million and diluted earnings per share was $0.50 for fiscal 1998. Net income was $178 million in fiscal 1997 and $172 million in fiscal 1996 and diluted earnings per share was $1.04 in fiscal 1997 and $1.03 in fiscal 1996.

Statement of Financial Accounting Standards No. 130, "Reporting Comprehensive Income" will be adopted in the first quarter of fiscal 1999 and the Company will provide the additional disclosure as required. Statement of Financial Accounting Standards No. 131, "Disclosures about Segments of an Enterprise and Related Information" also requires adoption in fiscal 1999 and the Company is in the process of determining the effects of this disclosure on its consolidated financial statements. In February 1998, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 132, "Pension and Other Postretirement Benefit Plans", which requires adoption in fiscal 1999 and the Company will provide additional disclosure as required. In June 1998, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 133, (FAS 133), "Accounting for Derivative Instruments and Hedging Activities", which requires adoption in periods beginning after June 15, 1999 and earlier adoption is permitted. The Company has not determined the timing of the adoption of FAS 133 or the impact of such adoption on its financial statements. In March 1998, Statement of Position, (SOP), 98-1 "Accounting for the Cost of Computer Software Developed for or Obtained for Internal Use" was issued. The Company is required to adopt SOP 98-1 in fiscal 2000. The Company has not determined the timing of the adoption of SOP 98-1 or the impact of such adoption on its financial statements.

The impact of inflation on the Company's business during the past three years has not been significant.

## LIQUIDITY AND CAPITAL RESOURCES

At October 31, 1998, the Company had $305 million of cash, cash equivalents and short-term investments compared to $341 million at November 1, 1997. The Company's operating activities generated net cash of $225 million, or 18% of sales, and $286 million, or 23% of sales, in fiscal 1998 and fiscal 1997, respectively. Investing activities used $187 million in fiscal 1998 and $226 million in fiscal 1997 while financing activities used $62 million in fiscal 1998 and generated $15 million in fiscal 1997. The Company's primary source of funds in fiscal 1998 and fiscal 1997 was net cash generated by operations.

Accounts receivable of $207 million at the end of fiscal 1998 decreased $49 million or 19% from $256 million at the end of fiscal 1997. This decrease resulted principally from a $35 million decrease in sales from the fourth quarter of fiscal 1997 to the fourth quarter of fiscal 1998 and a reduction in the number of days sales outstanding from 70 at the end of fiscal 1997 to 63 at the end of fiscal 1998. As a percentage of annualized fourth quarter sales, accounts receivable was 17.4% at the end of fiscal 1998, down from 19.2% at the end of fiscal 1997.

Inventories rose $49 million or 22% over the prior year to $275 million at the end of fiscal 1998. Inventories as a percentage of annualized fourth quarter sales increased to 23% for the year ended October 31, 1998 from 17% for the year ended November 1, 1997. Most of the increase occurred in the first half of fiscal 1998 in anticipation of increased demand. When demand declined in the second half of fiscal 1998, production rates were curtailed and the inventory levels were held relatively flat.

Accounts payable and accrued liabilities at the end of fiscal 1998 decreased $34 million or 20% compared to the balance at the end of fiscal 1997, due principally to decreased expense activity related to lower revenue and tighter cost constraints as well as decreased capital expenditures in the fourth quarter of fiscal 1998 when compared to the year earlier period.

The Company continued to improve its manufacturing facilities during fiscal 1998 and incurred capital expenditures of $167 million during the year, down from the $179 million incurred in fiscal 1997. The Company currently plans to make capital expenditures of approximately $100 million in fiscal 1999, primarily in connection with the continued improvement of its manufacturing facilities. Depreciation expense is expected to increase to approximately $140 million in fiscal 1999.

During fiscal 1998, the Company made the final payment of $56 million in accordance with a previous joint venture agreement with Taiwan Semiconductor Manufacturing Co., Ltd., (TSMC), and other investors for the construction and operation of a semiconductor fabrication facility in Camas, Washington. For a total investment of $140 million, the Company acquired an 18% equity ownership in the joint venture, known as WaferTech. The first installment of $42 million was paid in fiscal 1996, and the second installment of $42 million was paid in fiscal 1997. Subsequent to the year ended October 31, 1998, the Company concluded an agreement to sell 14% of its 18% equity ownership in WaferTech, for cash equal to the carrying value of the 14% equity ownership at October 31, 1998, to other WaferTech partners. This sale is expected to be completed by the end of the first quarter of fiscal 1999.

In fiscal 1998, financing activities used cash of $62 million and this included $84 million used to buy back 4.4 million shares of the Company's common stock at an average price of $19.13 per share. In May and October 1998, the Board of Directors authorized the Company to repurchase up to 4 million and 8 million shares, respectively, of common stock over the succeeding 12 months. The issuance of common stock under stock purchase and stock option plans generated cash of $28 million, and $12 million of cash was used for the repayment of capital lease obligations.

At October 31, 1998, the Company's principal sources of liquidity included $305 million of cash, cash equivalents and short-term investments. Short-term investments at the end of fiscal 1998 consisted of commercial paper, certificates of deposit and Euro time deposits with maturities greater than three months and less than six months at the time of acquisition. The Company also has various lines of credit both in the U.S. and overseas, including a $60 million credit facility in the U.S. which expires in 2000, all of which were substantially unused at the end of fiscal 1998. At the end of fiscal 1998, the Company's debt-to-equity ratio was 31%.

The Company believes that its existing sources of liquidity and cash expected to be generated from future operations, together with current and anticipated available long-term financing, will be sufficient to fund operations, capital expenditures and research and development efforts for the foreseeable future.

## QUALITATIVE AND QUANTITATIVE DISCLOSURE ABOUT MARKET RISK

The Company has fixed rate debt obligations and related interest rate swap and cap agreements. An increase in interest rates would not significantly increase interest expense due to the fixed nature of the Company's debt obligations. Because of the size and structure of these obligations, a 100 basis point increase in interest rates would not result in a material change in the Company's interest expense or the fair value of the debt obligations and related interest rate swap and cap agreements. The fair value of the Company's investment portfolio or related interest income would not be significantly impacted by either a 100 basis point increase or decrease in interest rates due mainly to the short-term nature of the major portion of the Company's investment portfolio and the relative insignificance of interest income to consolidated pre-tax income, respectively.

As more fully described in Note 2 (g) in the Notes to the Company's Consolidated Financial Statements, the Company regularly hedges its non-U.S. dollar-based exposures by entering into forward foreign exchange contracts, foreign currency option contracts and currency swap agreements. The terms of these contracts typically are for periods matching the duration of the underlying exposure and generally range from three months up to one year. The short-term nature of these contracts has resulted in these instruments having insignificant fair values at October 31, 1998 and November 1, 1997. The Company's largest foreign currency exposure is against the Japanese yen, primarily because Japan has a higher proportion of local currency denominated sales. Relative to foreign currency exposures existing at October 31, 1998 and November 1, 1997, a 10% unfavorable movement in foreign exchange rates would not expose the Company to significant losses in earnings or cash flows or significantly diminish the fair value of its foreign currency financial instruments, primarily due to the short lives of the affected financial instruments that effectively hedge substantially all of the Company's year-end exposures to fluctuations in foreign currency exchange rates. The calculation assumes that each exchange rate would change in the same direction relative to the U.S. dollar. In addition to the direct effects of changes in exchange rates, such changes typically affect the volume of sales or the foreign currency sales price as competitors' products become more or less attractive. The Company's sensitivity analysis of the effects of changes in foreign currency exchange rates does not factor in a potential change in sales levels or local currency selling prices.

LITIGATION

For information concerning certain pending litigation involving the Company, see Note 11 of the Notes to the Company's Consolidated Financial Statements.

FORWARD-LOOKING STATEMENTS

The "Management Analysis" and other sections of this report contain forward-looking statements that are based on current expectations, estimates, forecasts and projections about the industry and markets in which the Company operates, management's beliefs and assumptions made by management. In addition, other written or oral statements which constitute forward-looking statements may be made by or on behalf of the Company. Words such as "expects", "anticipates", "intends", "plans", "believes", "seeks", "estimates", variations of such words and similar expressions are intended to identify such forward-looking statements. These statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions which are difficult to predict. (See "Factors Which May Affect Future Results" below.) Therefore, actual outcomes and results may differ materially from what is expressed or forecasted in such forward-looking statements. The Company undertakes no obligation to update publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

FACTORS WHICH MAY AFFECT FUTURE RESULTS

The Company's future operating results are difficult to predict and may be affected by a number of factors including the timing of new product announcements or introductions by the Company and its competitors, competitive pricing pressures, fluctuations in manufacturing yields, adequate availability of wafers and manufacturing capacity, changes in product mix and economic conditions in the United States and international markets, such as the recent economic downturn in Southeast Asia and the outcome and impact of the Year 2000. In addition, the semiconductor market has historically been cyclical and subject to significant economic downturns at various times. The Company is exposed to the risk of obsolescence of its inventory depending on the mix of future business. As a result of these and other factors, there can be no assurance that the Company will not experience material fluctuations in future operating results on a quarterly or annual basis.

The Company's success depends in part on its continued ability to develop and market new products. There can be no assurance that the Company will be able to develop and introduce new products in a timely manner or that such products, if developed, will achieve market acceptance. In addition, the Company's growth is dependent on its continued ability to penetrate new markets such as the communications, computer and automotive segments of the electronics market, where the Company has limited experience and competition is intense. There can be no assurance that the markets being served by the Company will grow in the future; that the Company's existing and new products will meet the requirements of such markets; that the Company's products will achieve customer acceptance in such markets; that competitors will not force prices to an unacceptably low level or take market share from the Company; or that the Company can achieve or maintain profits in these markets. Also, some of the customers in these markets are less well established which could subject the Company to increased credit risk.

The semiconductor industry is intensely competitive. Certain of the Company's competitors have greater technical, marketing, manufacturing and financial resources than the Company. The Company's competitors also include emerging companies attempting to sell products to specialized markets such as those served by the Company. Competitors of the Company have, in some cases, developed and marketed products having similar design and functionality as the

Company's products. There can be no assurance that the Company will be able to compete successfully in the future against existing or new competitors or that the Company's operating results will not be adversely affected by increased price competition.

The Company has increased substantially its manufacturing capacity through both expansion of its production facilities and increased access to third-party foundries. However, the Company can give no assurance that it will not encounter unanticipated production problems at either its own facilities or at third-party foundries, or that the increased capacity will be sufficient to satisfy demand for its products. The Company relies, and plans to continue to rely, on assembly and test subcontractors and on third-party wafer fabricators to supply most of its wafers that can be manufactured using industry-standard digital processes, and such reliance involves several risks, including reduced control over delivery schedules, manufacturing yields and costs. In addition, the Company's capacity additions resulted in a significant increase in operating expenses, and if revenue levels do not increase to offset these additional expense levels, the Company's future operating results could be adversely affected. In addition, asset values could be impaired if the additional capacity is underutilized for an extended period of time. Also, non-compliance with "take or pay" covenants in certain of its supply agreements, could adversely impact operating results. The Company's business is subject to rapid technological changes and there can be no assurance that products stocked in inventory will not be rendered obsolete before they are shipped by the Company. The Company also believes that other semiconductor manufacturers have expanded their production capacity over the past several years, and there can be no assurance that the expansion by the Company and its competitors will not lead to overcapacity in the Company's target markets, which could lead to price erosion that would adversely affect the Company's operating results.

In fiscal 1998, 50% of the Company's revenues were derived from customers in international markets. The Company has manufacturing facilities outside the U.S. in Ireland, the Philippines and Taiwan. The Company also has supply agreements that include "take or pay" covenants with suppliers located in SEA and as part of these arrangements, the Company has $26 million on deposit with two of these suppliers. The Company also has a $21 million investment in one of these suppliers. In addition, the Company's major partner in its joint venture, WaferTech, is TSMC which is located in the SEA region. As well as being exposed to the ongoing economic cycles in this industry, the Company is also subject to the economic and political risks inherent in international operations, including the risks associated with the ongoing uncertainties in the economies in SEA. These risks include air transportation disruptions, expropriation, currency controls and changes in currency exchange rates, tax and tariff rates and freight rates. Although the Company engages in certain hedging transactions to reduce its exposure to currency exchange rate fluctuations, there can be no assurance that the Company's competitive position will not be adversely affected by changes in the exchange rate of the U.S. dollar against other currencies.

The semiconductor industry is characterized by frequent claims and litigation involving patent and other intellectual property rights. The Company has from time to time received, and may in the future receive, claims from third parties asserting that the Company's products or processes infringe their patents or other intellectual property rights. In the event a third party makes a valid intellectual property claim and a license is not available on commercially reasonable terms, the Company's operating results could be materially and adversely affected. Litigation may be necessary to enforce patents or other intellectual property rights of the Company or to defend the Company against claims of infringement, and such litigation can be costly and divert the attention of key personnel. See Note 11 of the Notes to the Company's Consolidated Financial Statements, for information concerning certain pending litigation involving the Company. An adverse outcome in such litigation, may, in certain cases, have a material adverse effect on the Company's consolidated financial position or on its consolidated results of operations or cash flows in the period in which the litigation is resolved.

The Company's software applications have been updated to accommodate the new Euro currency. System testing was completed during the fourth quarter of calendar 1998 and the Euro functionality was implemented as planned on January 1, 1999. No major system-related issues were encountered and none are anticipated. The impact, either positive or negative, of the Euro on the European economy generally and on the Company's operations in Europe in the future is unknown at this time.

Because of these and other factors, past financial performance should not be considered an indicator of future performance. Investors should not use historical trends to anticipate future results and should be aware that the trading price of the Company's common stock may be subject to wide fluctuations in response to quarter-to-quarter variations in operating results, general conditions in the semiconductor industry, changes in earnings estimates and recommendations by analysts or other events.

YEAR 2000

Over the past five years the Company has made significant investments in new manufacturing, financial and operating hardware and software. These investments were made to support the growth of its operations; however, the by-product of this effort is that the Company now has year 2000 compliant hardware and software running on many of its major platforms.

The Company has made the year 2000 issue a significant priority and a task force is engaged in the ongoing effort to reduce the year 2000 related risk in the balance of the Company's systems and equipment. It is estimated that the cost of this project, which essentially commenced at the beginning of fiscal 1998, is approximately $10 million in total, for fiscal 1998 and fiscal 1999. The task force's efforts are concentrated in six separate areas. The status of each area as of December 31, 1998 is summarized below.

Centrally Managed Global Systems

Centrally managed global systems are the enterprisewide, centrally managed operating systems, which include customer service, customer order entry, work-in-progress (WIP) tracking, warehousing, production planning, and financial systems. These systems have been split into "mission critical" and "non-mission critical". Mission critical is defined as systems that can seriously impair the Company's ability to conduct its business. Of the 15 mission critical applications identified as of August 1, 1998, three systems were not Y2K compliant, Promis (WIP tracking), the order entry system in Japan and the Electronic Data Interchange (EDI) translator. Since that time Promis system upgrades have been completed in three of the five manufacturing sites, and the remaining two are scheduled to be upgraded in early 1999. Also scheduled in early 1999 is the migration to SAP for order entry in Japan and the upgrade of the EDI translator. These actions will result in 100% compliance for mission critical systems. In addition, several mission critical systems, such as SAP, Forecasting, Data Warehouse and Distributor Management systems have been specifically tested and certified to be year 2000 compliant. The Company is on schedule towards retiring its non-compliant mainframe in early 1999. Non-mission critical is defined as systems which would not cause serious impairment to the organization. The task force is continually reviewing and re-prioritizing the non-mission critical systems to ensure that the appropriate items are receiving the proper attention.

Design and Engineering Systems

The Company's Computer Aided Design (CAD) Council is leading a worldwide year 2000 compliancy review of hardware and software related to design and engineering systems. The team has completed its analysis and the required changes to CAD operating systems are underway. The systems are expected to be compliant in early 1999, even though some reporting tools will not be available until June 1999. Critical CAD applications software packages have all been certified Y2K compliant. Migration to these new packages, however, will proceed over the next 8 to 10 months. The Company believes that if all design engineering systems are not compliant in time, this will result in inconvenience and inefficiencies rather than any significant risk to operations.

Site Based Manufacturing Systems

Manufacturing site managers are committed to ensuring a successful transition of operations in the year 2000. All critical manufacturing equipment has been identified and analyzed. The analysis process includes ensuring that date compliance is necessary. The Company is considering "rolling back" the internal date mechanism as a contingency plan for some equipment and the task force is in the process of testing the effects of this solution. All manufacturing sites are performing Y2K compliance testing and this effort is expected to continue through the first quarter of fiscal 1999. All testing is being done to the latest vendor specifications and by using the suite of test programs provided by Sematech, a semiconductor research organization. Thus far, no crucial piece of equipment has been identified where there is a Y2K compliance problem for which no solution exists. In all instances where a Y2K compliance issue has arisen, the Company has been able to develop a solution, without having to replace the equipment. While the review is not yet complete, the Company does not foresee any manufacturing equipment-related obstacles which would prevent the continuation of operations in Year 2000.

### Personal Computers (PCs)

The Company has a PC Standards Committee, comprised of participants from various Company locations. This committee has selected a tool and developed a hardware and software certification plan. This plan requires certification of PC Basic Input/Output System (BIOS), software applications and user files. The Company has targeted the first quarter of 1999 to certify the BIOS on its 3,500 networked PCs and will issue a tool to assist users to analyze their data files for potential year 2000 issues. In addition, a year 2000 "patch" is available for the Microsoft Office Suite (Excel, Word and Access) and this is scheduled to be implemented in April 1999. The Company does not foresee any year 2000 issues in this area.

### Facility Related Systems

Systems such as heating, sprinklers, elevators and card-key access are also being reviewed by site teams. Each team has a designated facilitator and there are representatives from each department participating. All of the teams have taken a thorough inventory of their site's systems and the Company expects to be 100% compliant by December 31, 1999 with 80% of the facility systems to be compliant by the second quarter of 1999.

### Third Party

The corporate year 2000 task force is also reviewing third-party connectivity issues. The Company's EDI translator supplier, Harbinger, has been successfully tested for Y2K compliance. The EDI carrier, GEIS, has notified the Company that it is compliant as well. Other external service providers, primarily financial and human resource services, as well as outside vendors, have also been surveyed as to their state of readiness and most expect to be Y2K compliant. In addition, the Company was able to test its financial interface for Y2K compliance with its major financial services provider and the results were successful.

The Company currently believes that its most reasonably likely worst case year 2000 scenario would relate to problems with systems of third parties which would create the greatest risks with infrastructure, including water and sewer services, electricity, transportation, telecommunications and critical supplies or raw materials and spare parts. Because the Company's ability to eliminate these problems is limited, contingency plans are limited to ensuring that adequate supplies of critical raw materials and spare parts are in stock at December 31, 1999. The Company is assessing various scenarios and contingency planning will continue during 1999 as the Company completes the remedial work on its internal systems and assesses the state of readiness of its third-party suppliers.

### Summary

The Company believes that the year 2000 issue will not pose significant operational problems. However, year 2000 issues could have a significant impact on the Company's operations and its financial results if modifications to internal systems and equipment cannot be completed on a timely basis; unforeseen needs or problems arise; or if the systems operated by third parties are not year 2000 compliant.

Exhibit 13.2

ANALOG DEVICES, INC.
CONSOLIDATED STATEMENTS OF INCOME

| Years ended October 31, 1998, November 1, 1997 and November 2, 1996 (thousands except per share amounts) | | 1998 | 1997 | 1996 |
|---|---|---|---|---|
| REVENUE | Net sales | $ 1,230,571 | $ 1,243,494 | $ 1,193,786 |
| COSTS AND EXPENSES | Cost of sales | 642,085 | 622,531 | 592,936 |
| | Gross margin | 588,486 | 620,963 | 600,850 |
| | Operating expenses: | | | |
| | Research and development | 219,354 | 196,148 | 177,772 |
| | Selling, marketing, general and administrative | 207,487 | 191,613 | 195,842 |
| | Restructuring charge | 17,000 | - | - |
| | Gain on sale of business | (13,100) | - | - |
| | | 430,741 | 387,761 | 373,614 |
| | Operating income | 157,745 | 233,202 | 227,236 |
| | Equity in loss (income) of WaferTech | 9,780 | (214) | 97 |
| | Nonoperating (income) expenses: | | | |
| | Interest expense | 11,229 | 12,507 | 11,289 |
| | Interest income | (16,838) | (16,178) | (16,535) |
| | Other | 3,115 | 1,208 | 1,645 |
| | | (2,494) | (2,463) | (3,601) |
| EARNINGS | Income before income taxes | 150,459 | 235,879 | 230,740 |
| | Provision for income taxes: | | | |
| | Payable currently | 43,343 | 63,794 | 52,115 |
| | Deferred | (12,372) | (6,134) | 6,724 |
| | | 30,971 | 57,660 | 58,839 |
| | Net income before cumulative effect of change in accounting principle | 119,488 | 178,219 | 171,901 |
| | Cumulative effect of change in accounting principle, net of $20 million of income taxes | (37,080) | - | - |
| | Net income after cumulative effect of change in accounting principle | $ 82,408 | $ 178,219 | $ 171,901 |
| | Shares used to compute earnings per share - Basic | 161,574 | 159,594 | 153,362 |
| | Shares used to compute earnings per share - Diluted | 177,875 | 177,309 | 171,377 |
| | Earnings per share before cumulative effect of change in accounting principle | | | |
| | Earnings per share - Basic | $0.74 | $1.13 | $1.12 |
| | Earnings per share - Diluted | $0.71 | $1.04 | $1.03 |
| | Earnings per share after cumulative effect of change in accounting principle | | | |
| | Earnings per share - Basic | $0.51 | $1.13 | $1.12 |
| | Earnings per share - Diluted | $0.50 | $1.04 | $1.03 |

See accompanying notes.

ANALOG DEVICES, INC.
CONSOLIDATED BALANCE SHEETS

October 31, 1998 and November 1, 1997
(thousands except share amounts)

| ASSETS | | 1998 | 1997 |
|---|---|---|---|
| CURRENT ASSETS | Cash and cash equivalents | $ 263,331 | $ 289,601 |
| | Short-term investments | 41,575 | 51,006 |
| | Accounts receivable less allowances of $32,332 ($40,007 in 1997) | 207,361 | 255,886 |
| | Inventories | 275,076 | 225,966 |
| | Deferred tax assets | 98,148 | 54,761 |
| | Prepaid expenses and other current assets | 18,038 | 18,209 |
| | Total current assets | 903,529 | 895,429 |
| PROPERTY, PLANT AND EQUIPMENT, AT COST | Land and buildings | 158,792 | 145,952 |
| | Machinery and equipment | 1,034,619 | 938,602 |
| | Office equipment | 70,576 | 58,714 |
| | Leasehold improvements | 103,482 | 87,407 |
| | | 1,367,469 | 1,230,675 |
| | Less accumulated depreciation and amortization | 664,038 | 569,040 |
| | Net property, plant and equipment | 703,431 | 661,635 |
| OTHER ASSETS | Investments | 187,224 | 131,468 |
| | Intangible assets, net | 15,815 | 14,768 |
| | Other assets | 51,731 | 60,553 |
| | Total other assets | 254,770 | 206,789 |
| | | $1,861,730 | $1,763,853 |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | | |
| CURRENT LIABILITIES | Short-term borrowings and current portion of long-term debt | $ 193 | $ - |
| | Obligations under capital leases | 14,266 | 11,733 |
| | Accounts payable | 59,115 | 97,654 |
| | Deferred income on shipments to distributors | 113,784 | 37,013 |
| | Income taxes payable | 53,595 | 52,550 |
| | Accrued liabilities | 79,906 | 75,444 |
| | Total current liabilities | 320,859 | 274,394 |
| NONCURRENT LIABILITIES | Long-term debt | 309,985 | 310,000 |
| | Noncurrent obligations under capital leases | 30,773 | 38,852 |
| | Deferred income taxes | 31,789 | 20,740 |
| | Other noncurrent liabilities | 39,935 | 31,737 |
| | Total noncurrent liabilities | 412,482 | 401,329 |
| | Commitments and Contingencies | | |
| STOCKHOLDERS' EQUITY | Preferred stock, $1.00 par value, 500,000 shares authorized, none outstanding | - | - |
| | Common stock, $0.16 2/3 par value, 600,000,000 shares authorized, 164,092,719 shares issued (161,941,094 in 1997) | 27,349 | 26,991 |
| | Capital in excess of par value, net of deferred compensation of $9,291 ($6,343 in 1997) | 248,970 | 223,885 |
| | Retained earnings | 913,992 | 831,584 |
| | Cumulative translation adjustment | 6,025 | 6,724 |
| | | 1,196,336 | 1,089,184 |
| | Less 3,782,763 shares in treasury, at cost (35,094 in 1997) | 67,947 | 1,054 |
| | Total stockholders' equity | 1,128,389 | 1,088,130 |
| | | $1,861,730 | $1,763,853 |

See accompanying notes.

ANALOG DEVICES, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

| Years ended October 31, 1998, November 1, 1997 and November 2, 1996 (THOUSANDS) | | COMMON STOCK SHARES | COMMON STOCK AMOUNT | CAPITAL IN EXCESS OF PAR VALUE | RETAINED EARNINGS | CUMULATIVE TRANSLATION ADJUSTMENT | TREASURY STOCK SHARES | TREASURY STOCK AMOUNT |
|---|---|---|---|---|---|---|---|---|
| | Balance, October 28, 1995 | 114,584 | $19,098 | $149,775 | $481,464 | $ 5,870 | (52) | $ (241) |
| ACTIVITY IN FISCAL 1996 | Net income - 1996 | | | | 171,901 | | | |
| | Issuance of stock under stock plans and other, net of repurchases | 2,228 | 371 | 15,474 | | | 52 | 241 |
| | Exercise of warrants | 2,250 | 375 | 11,721 | | | | |
| | Compensation recognized under Restricted Stock Plan | | | 1,949 | | | | |
| | Tax benefit on exercise of non-qualified stock options and disqualifying dispositions under stock plans | | | 4,052 | | | | |
| | Four-for-three stock split | 39,683 | 6,614 | (6,614) | | | | |
| | Currency translation adjustment | | | | | 785 | | |
| | Balance, November 2, 1996 | 158,745 | 26,458 | 176,357 | 653,365 | 6,655 | - | - |
| ACTIVITY IN FISCAL 1997 | Net income - 1997 | | | | 178,219 | | | |
| | Issuance of stock under stock plans and other, net of repurchases | 3,196 | 533 | 19,446 | | | (35) | (1,054) |
| | Compensation recognized under Restricted Stock Plan | | | 2,309 | | | | |
| | Tax benefit on exercise of non-qualified stock options and disqualifying dispositions under stock plans | | | 25,773 | | | | |
| | Currency translation adjustment | | | | | 69 | | |
| | Balance, November 1, 1997 | 161,941 | 26,991 | 223,885 | 831,584 | 6,724 | (35) | (1,054) |
| ACTIVITY IN FISCAL 1998 | Net income - 1998 | | | | 82,408 | | | |
| | Issuance of stock under stock plans and other, net of repurchases | 2,152 | 358 | 8,738 | | | 652 | 17,299 |
| | Compensation recognized under Restricted Stock Plan | | | 2,918 | | | | |
| | Tax benefit on exercise of non-qualified stock options and disqualifying dispositions under stock plans | | | 13,429 | | | | |
| | Repurchase of common stock | | | | | | (4,400) | (84,192) |
| | Currency translation adjustment | | | | | (699) | | |
| | Balance, October 31, 1998 | 164,093 | $27,349 | $248,970 | $913,992 | $ 6,025 | (3,783) | $(67,947) |

See accompanying notes.

ANALOG DEVICES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

| Years ended October 31, 1998, November 1, 1997 and November 2, 1996 (thousands) | | 1998 | 1997 | 1996 |
|---|---|---|---|---|
| OPERATIONS | Cash flows from operations: | | | |
| | Net income | $ 82,408 | $ 178,219 | $ 171,901 |
| | Adjustments to reconcile net income to net cash provided by operations: | | | |
| | Cumulative effect of change in accounting principle, net of $20 million of income taxes | 37,080 | - | - |
| | Depreciation and amortization | 127,560 | 103,554 | 83,809 |
| | Noncash portion of restructuring costs | 10,000 | - | - |
| | Gain on sale of business | (13,100) | - | - |
| | Equity in loss of WaferTech, net of dividends | 10,907 | 211 | 97 |
| | Deferred income taxes | (12,372) | (6,134) | 6,565 |
| | Change in operating assets and liabilities: | | | |
| | Decrease (increase) in accounts receivable | 51,061 | (25,129) | (67,744) |
| | Increase in inventories | (48,883) | (7,739) | (76,748) |
| | Decrease (increase) in prepaid expenses and other current assets | 240 | (3,605) | (4,782) |
| | Increase in investments - trading | (7,319) | (8,965) | - |
| | Increase in accounts payable, deferred income and accrued liabilities | (31,840) | 4,828 | 24,728 |
| | Increase in income taxes payable | 14,476 | 32,916 | 425 |
| | Increase in other liabilities | 4,467 | 17,584 | 5,563 |
| | Total adjustments | 142,277 | 107,521 | (28,087) |
| | Net cash provided by operations | 224,685 | 285,740 | 143,814 |
| INVESTMENTS | Cash flows from investments: | | | |
| | Additions to property, plant and equipment, net | (166,911) | (179,374) | (234,099) |
| | Purchase of short-term investments available for sale | (143,449) | (153,269) | (262,648) |
| | Maturities of short-term investments available for sale | 152,880 | 192,073 | 254,648 |
| | Long-term investments | (56,110) | (51,599) | (54,499) |
| | Proceeds from sale of business | 27,000 | - | - |
| | Increase in other assets | (370) | (33,650) | (8,971) |
| | Net cash used for investments | (186,960) | (225,819) | (305,569) |
| FINANCING ACTIVITIES | Cash flows from financing activities: | | | |
| | Repurchase of common stock | (84,192) | - | - |
| | Proceeds from employee stock plans | 27,638 | 19,283 | 14,028 |
| | Payments on capital lease obligations | (11,640) | (11,164) | (7,227) |
| | Proceeds from equipment financing | 6,094 | 7,123 | 61,793 |
| | Net increase (decrease) in variable rate borrowings | 60 | (109) | (3,580) |
| | Proceeds from issuance of long-term debt | - | - | 224,385 |
| | Proceeds from warrants exercised | - | - | 12,096 |
| | Net cash provided by (used for) financing activities | (62,040) | 15,133 | 301,495 |
| | Effect of exchange rate changes on cash | (1,955) | 4,438 | 1,066 |
| | Net (decrease) increase in cash and cash equivalents | (26,270) | 79,492 | 140,806 |
| | Cash and cash equivalents at beginning of year | 289,601 | 210,109 | 69,303 |
| | Cash and cash equivalents at end of year | $ 263,331 | $ 289,601 | $ 210,109 |
| SUPPLE-MENTAL INFORMATION | Cash paid during the year for: | | | |
| | Income taxes | $ 23,582 | $ 27,621 | $ 52,541 |
| | Interest | $ 15,535 | $ 16,158 | $ 10,171 |

See accompanying notes.

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

YEARS ENDED OCTOBER 31, 1998, NOVEMBER 1, 1997 AND NOVEMBER 2, 1996
(ALL TABULAR AMOUNTS IN THOUSANDS EXCEPT PER SHARE AMOUNTS)

1. DESCRIPTION OF BUSINESS

Analog Devices, Inc. (Analog, ADI or the Company) is a semiconductor company that designs, manufactures and markets high-performance integrated circuits (ICs) used in analog and digital signal processing (DSP). Nearly all of ADI's products are components, which are typically incorporated by original equipment manufacturers (OEMs) in a wide range of equipment and systems for use in communications, computer, industrial, instrumentation, military/aerospace, automotive and high-performance consumer electronics applications.

The Company's principal products include general-purpose, standard-function analog and mixed-signal ICs and DSP ICs. DSP ICs include general-purpose digital signal processing ICs and application-specific devices that typically incorporate analog and mixed-signal circuitry and a DSP core.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a. PRINCIPLES OF CONSOLIDATION

The consolidated financial statements include the accounts of the Company and all of its wholly owned subsidiaries. Upon consolidation, all significant intercompany accounts and transactions are eliminated. The Company's fiscal year ends on the Saturday closest to the last day in October. Fiscal years 1998 and 1997 were each 52 week years, while 1996 was a 53 week year.

Certain amounts reported in previous years have been reclassified to conform to the 1998 presentation, such reclassifications were immaterial.

b. CASH, CASH EQUIVALENTS AND INVESTMENTS

Cash and cash equivalents are highly liquid investments with insignificant interest rate risk and maturities of three months or less at the time of acquisition. Investments with maturities between three and twelve months at time of acquisition are considered short-term investments. Cash, cash equivalents and short-term investments consist primarily of commercial paper, but also include certificates of deposit and bankers' acceptances. Long-term investments consist of equity securities as well as bank money market funds and other deposits.

The Company classifies its investments in debt and equity securities as "held-to-maturity," "available-for-sale," and "trading" at the time of purchase and such designation is evaluated as of each balance sheet date. Held-to-maturity securities, which are carried at amortized cost, include only those securities the Company has the positive intent and ability to hold to maturity. Securities, such as bank time deposits, which by their nature are typically held to maturity, are classified as such. While it is the intent of management to hold securities to maturity, unforeseen events, while not generally expected, could cause the Company to liquidate certain securities prior to maturity. Accordingly, those securities which could readily be sold back to the seller are classified as available-for-sale or trading. Available-for-sale securities are carried at fair value with unrealized gains and losses, net of related tax, if any, reported as a separate component of stockholders' equity. Realized gains and losses, declines in value judged to be "other than temporary," as well as interest, dividends and capital gains distributions on all securities are included in earnings.

Cash equivalents and short-term investments classified as available-for-sale were $241 million and $300 million at October 31, 1998 and November 1, 1997, respectively and those classified as held-to-maturity were $42 million and $17 million at October 31, 1998 and November 1, 1997, respectively. All of these securities have contractual maturities of six months or less at time of acquisition. Because of the short term to maturity, and hence relative price insensitivity to changes in market interest rates, amortized cost approximates fair value for all of these securities. As such, no unrealized gains or losses were recorded during each of these years. Long-term investments classified as available-for-sale were $13 million and held-to-maturity were $2 million at November 1, 1997, and there were no long-term investments with either of these classifications at October 31, 1998.

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

Realized and unrealized gains and losses on equity securities classified as available-for-sale during fiscal 1998 and fiscal 1997 were not material. Long-term investments classified as trading were $30 million and $9 million at October 31, 1998 and November 1, 1997, respectively and were based on published market quotes on October 30, 1998 and October 31, 1997. In both fiscal years, these investments primarily consisted of equity securities. Gross realized and unrealized gains and losses from trading securities were not material in fiscal 1998 and fiscal 1997.

c. INVENTORIES

Inventories are valued at the lower of cost (first-in, first-out method) or market. Inventories at October 31, 1998 and November 1, 1997 were as follows:

| | 1998 | 1997 |
|---|---|---|
| Raw materials | $ 25,624 | $ 31,526 |
| Work in process | 142,139 | 128,187 |
| Finished goods | 107,313 | 66,253 |
| Total inventories | $ 275,076 | $ 225,966 |

d. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment is recorded at cost less allowances for depreciation and amortization. The straight-line method of depreciation is used for all classes of assets for financial statement purposes; both straight-line and accelerated methods are used for income tax purposes. Capitalized leases and leasehold improvements are amortized based upon the lesser of the term of the lease or the useful life of the asset. Depreciation and amortization are based on the following useful lives:

| | |
|---|---|
| Buildings & Building Equipment | Up to 25 years |
| Machinery & Equipment | 3-10 years |
| Office Equipment | 3-8 years |

Total depreciation and amortization of property, plant and equipment was $124,735,000, $101,432,000 and $81,740,000 in fiscal 1998, 1997 and 1996, respectively. Property, plant and equipment included $75,006,000 and $68,912,000 of capitalized leases in 1998 and 1997, net of $23,679,000 and $13,859,000 respectively, of accumulated depreciation.

e. GRANT ACCOUNTING

The Company's manufacturing facility in Limerick, Ireland has received various grants from the Industrial Development Authority of the Republic of Ireland. These grants include capital, employment, and research and development grants. Capital grants for the acquisition of property and equipment are netted against the related capital expenditures and amortized as a credit to depreciation expense over the useful life of the related asset. Employment grants, which relate to employee hiring and training, and research and development grants are recognized in earnings in the period in which the related expenditures are incurred by the Company.

f. TRANSLATION OF FOREIGN CURRENCIES

The functional currency for the Company's foreign sales operations is the applicable local currency. Gains and losses resulting from translation of these foreign currencies into U.S. dollars are accumulated in a separate component of stockholders' equity. Transaction gains and losses are included in income currently, including those at the Company's principal foreign manufacturing operations where the functional currency is the U.S. dollar. Foreign currency transaction gains or losses included in other expenses, net, were not material in fiscal 1998, 1997 and 1996.

g. FOREIGN CURRENCY INSTRUMENTS AND INTEREST RATE AGREEMENTS

The Company enters into forward foreign exchange contracts, foreign currency option contracts and currency swap agreements to offset certain operational and balance sheet exposures from changes in foreign currency exchange rates. Such exposures result from the portion of the Company's operations, assets and liabilities that are denominated in currencies other than the U.S. dollar, primarily Japanese yen and European currencies. These foreign exchange contract, option and swap transactions are entered into to support product sales, purchases and financing transactions made in the normal course of business, and accordingly, are not speculative in nature.

Forward foreign exchange contracts are utilized to manage the risk associated with currency fluctuations on certain firm sales and purchase commitments denominated in foreign currencies and certain non-U.S. dollar denominated asset and liability positions. The Company's forward foreign exchange contracts are primarily denominated in Japanese yen and certain European currencies and are for periods consistent with the terms of the underlying transactions, generally one year or less. The forward foreign exchange contracts that relate to firm, foreign currency sales and purchase commitments are designated and effective as hedges of firm, identifiable foreign currency commitments, and accordingly, the gains and losses resulting from the impact of currency exchange rate movements on these contracts are not recognized in operations until the underlying hedged transactions are recognized. Upon recognition, such gains and losses are recorded in operations as an adjustment to the carrying amount of the underlying transactions in the period in which these transactions are recognized. Unrealized gains and losses resulting from the impact of currency exchange rate movements on forward foreign exchange contracts designated to offset certain non-U.S. dollar denominated assets and liabilities are recognized as other income or expense in the period in which the exchange rates change and offset the foreign currency gains and losses on the underlying exposures being hedged. The contract amounts of forward foreign exchange contracts outstanding were $140 million and $163 million at October 31, 1998 and November 1, 1997, respectively.

The Company also may periodically enter into foreign currency option contracts to offset certain probable anticipated, but not firmly committed, foreign currency transactions related to the sale of product during the ensuing nine months. When the dollar strengthens significantly against the foreign currencies, the decline in value of future currency cash flows is partially offset by the gains in value of the purchased currency options designated as hedges. Conversely, when the dollar weakens, the increase in value of future foreign currency cash flows is reduced only by the premium paid to acquire the options. The Company's foreign currency option contracts are primarily denominated in Japanese yen and generally have maturities which do not exceed six months. These foreign currency option contracts are designated and effective as hedges of anticipated foreign currency sales transactions, and accordingly, the premium cost and any realized gains associated with these contracts are deferred and included in the consolidated balance sheet as prepaid expenses and accrued liabilities, respectively, until such time as the underlying sales transactions are recognized. Upon recognition, such premium costs and any realized gains are recorded in sales as a component of the underlying sales transactions being hedged. The contract amounts of foreign currency option contracts outstanding were $26 million and $29 million, at October 31, 1998 and November 1, 1997, respectively. Deferred gains or losses attributable to foreign currency option contracts were not material at October 31, 1998 and November 1, 1997.

The Company uses currency swap agreements to hedge the value of its net investment in certain of its foreign subsidiaries. Realized and unrealized gains and losses on such agreements related to the net foreign investment being hedged are recognized in the cumulative translation adjustment component of stockholders' equity, with the related amounts due to or from counterparties included in accrued liabilities or other current assets. The contract amount of currency swap agreements outstanding, which were principally denominated in Japanese yen, was $10.0 million at October 31, 1998 and November 1, 1997. The currency swap agreement outstanding at October 31, 1998 has a remaining maturity of 1.5 years and is expected to remain in effect until expiration.

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

The Company enters into interest rate swap and cap agreements to manage its exposure to interest rate movements by effectively converting a portion of its debt and certain financing arrangements from fixed to variable rates. Maturity dates of interest rate swap and cap agreements generally match those of the underlying debt or financing arrangements. These agreements, which have maturities of up to nine years involve the exchange of fixed rate payments for variable rate payments without the exchange of the underlying principal amounts. Variable rates are based on six-month U.S. dollar LIBOR and are reset on a semiannual basis. The differential between fixed and variable rates to be paid or received is accrued as interest rates change in accordance with the agreements and recognized over the life of the agreements as an adjustment to interest expense. The notional principal amounts of interest rate swap and cap agreements outstanding were approximately $50 million, at October 31, 1998 and November 1, 1997.

The cash requirements of the above-described financial instruments approximate their fair value. Cash flows associated with these financial instruments are classified consistent with the cash flows from the transactions being hedged.

Derivative financial instruments involve, to a varying degree, elements of market and credit risk not recognized in the consolidated financial statements. The market risk associated with these instruments resulting from currency exchange rate or interest rate movements is expected to offset the market risk of the underlying transactions, assets and liabilities being hedged. The counterparties to the agreements relating to the Company's foreign exchange and interest rate instruments consist of a number of major international financial institutions with high credit ratings. The Company does not believe that there is significant risk of nonperformance by these counterparties because the Company continually monitors the credit ratings of such counterparties, and limits the financial exposure and the amount of agreements entered into with any one financial institution. While the contract or notional amounts of derivative financial instruments provide one measure of the volume of these transactions, they do not represent the amount of the Company's exposure to credit risk. The amounts potentially subject to credit risk (arising from the possible inability of counterparties to meet the terms of their contracts) are generally limited to the amounts, if any, by which the counterparties' obligations under the contracts exceed the obligations of the Company to the counterparties.

h. FAIR VALUES OF FINANCIAL INSTRUMENTS

The following estimated fair value amounts have been determined by the Company using available market information and appropriate valuation methodologies. However, considerable judgment is required in interpreting market data to develop the estimates of fair value. Accordingly, the estimates presented herein are not necessarily indicative of the amounts that the Company could realize in a current market exchange.

| | OCTOBER 31, 1998 | | NOVEMBER 1, 1997 | |
|---|---|---|---|---|
| | CARRYING AMOUNT | FAIR VALUE | CARRYING AMOUNT | FAIR VALUE |
| Assets: | | | | |
| Cash and cash equivalents | $ 263,331 | $ 263,331 | $ 289,601 | $ 289,601 |
| Short-term investments | 41,575 | 41,575 | 51,006 | 51,006 |
| Long-term investments | 30,488 | 30,488 | 23,168 | 23,168 |
| Liabilities: | | | | |
| Short-term borrowings | (193) | (193) | - | - |
| Long-term debt, including current portion | (309,985) | (328,290) | (310,000) | (427,640) |
| Foreign Currency Instruments and Interest Rate Agreements: | | | | |
| Interest rate swap and cap agreements | 14 | 1,201 | (31) | (413) |
| Forward foreign currency exchange contracts | (3,045) | (1,575) | 2,260 | (400) |
| Foreign currency option contracts | 479 | 211 | 267 | 187 |
| Currency swap agreements | 1,325 | 1,324 | 1,632 | 1,363 |

The following methods and assumptions were used by the Company in estimating its fair value disclosures for financial instruments:

Cash, cash equivalents and investments-The carrying amounts of these items are a reasonable estimate of their fair value due to the short term to maturity and readily available market for these types of investments.

Short-term borrowings-The carrying amounts of these variable-rate borrowings approximate fair value due to the short period of time to maturity.

Long-term debt-The fair value of long-term debt is estimated based on current interest rates available to the Company for debt instruments with similar terms, degree of risk and remaining maturities.

Interest rate swap and cap agreements-The fair value of interest rate swap and cap agreements are obtained from dealer quotes. These values represent the estimated amount the Company would receive or pay to terminate the agreements taking into consideration current interest rates.

Forward foreign currency exchange contracts-The estimated fair value of forward foreign currency exchange contracts is based on the estimated amount at which they could be settled based on forward market exchange rates.

Foreign currency option contracts and currency swap agreements-The fair values of foreign currency option contracts and currency swap agreements are obtained from dealer quotes. These values represent the estimated net amount the Company would receive or pay to terminate the agreements.

i. USE OF ESTIMATES

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingencies at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Such estimates relate to the useful lives of fixed assets, allowances for doubtful accounts and customer returns, inventory reserves, potential reserves relating to litigation matters, accrued liabilities, and other reserves. Actual results could differ from those estimates, and such differences may be material to the financial statements.

j. CONCENTRATIONS OF CREDIT RISK

Financial instruments which potentially subject the Company to concentrations of credit risk consist principally of investments and trade accounts receivable.

The Company maintains cash, cash equivalents and short-term investments with high credit quality financial institutions and monitors the amount of credit exposure to any one financial institution.

The Company sells its products to distributors and original equipment manufacturers involved in a variety of industries including industrial automation, instrumentation, military/aerospace, and to an increasing degree, communications, computers and peripherals, and high-performance consumer electronics. The Company has adopted credit policies and standards to accommodate growth in these markets. The Company performs continuing credit evaluations of its customers' financial condition and although the Company generally does not require collateral, letters of credit may be required from its customers in certain circumstances. Reserves are provided for estimated amounts of accounts receivable which may not be collected.

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

k. CONCENTRATION OF OTHER RISKS

The semiconductor industry is characterized by rapid technological change, competitive pricing pressures, and cyclical market patterns. The Company's financial results are affected by a wide variety of factors, including general economic conditions worldwide, economic conditions specific to the semiconductor industry, the timely implementation of new manufacturing technologies, the ability to safeguard patents and intellectual property in a rapidly evolving market, and reliance on assembly and test subcontractors, third-party wafer fabricators and independent distributors. In addition, the semiconductor market has historically been cyclical and subject to significant economic downturns at various times. The Company is exposed to the risk of obsolescence of its inventory depending on the mix of future business. As a result, the Company may experience significant period-to-period fluctuations in future operating results due to the factors mentioned above or other factors.

l. REVENUE RECOGNITION

Revenue from product sales to end users is recognized upon shipment. As further explained in Note 4, commencing in 1998, revenue on shipments to all distributors is deferred until products are resold by the distributors to end users. Prior to 1998, revenue on most shipments to domestic distributors was deferred until resale to end users because arrangements with these distributors included returns and price concessions which could not be reasonably estimated. Revenue on all shipments to international distributors and certain shipments to domestic distributors were recognized upon shipment to the distributor, with appropriate provision of reserves for returns and allowances.

m. INCOME TAXES

Deferred tax assets and liabilities are determined based on the differences between financial reporting and tax bases of assets and liabilities and are measured using the enacted income tax rates and laws that will be in effect when the temporary differences are expected to reverse. Additionally, deferred tax assets and liabilities are separated into current and noncurrent amounts based on the classification of the related assets and liabilities for financial reporting purposes.

n. STOCK-BASED COMPENSATION

The Company grants stock options for a fixed number of shares to employees with an exercise price equal to the fair value of the shares at the date of grant. The Company accounts for stock option grants in accordance with APB Opinion No. 25, "Accounting for Stock Issued to Employees" and accordingly, recognizes no compensation expense for the stock option grants.

o. EARNINGS PER SHARE OF COMMON STOCK

The Company adopted Statement of Financial Accounting Standards No. 128, "Earnings per Share," in the first quarter of fiscal 1998. The Company changed the method used to compute earnings per share and restated all prior periods. Under the new requirements, primary and fully diluted earnings per share were replaced by basic and diluted earnings per share. Basic earnings per share is computed based only on the weighted average number of common shares outstanding during the period and the dilutive effect of future issues of common stock relating to stock options programs and convertible debt financing is excluded. Diluted earnings per share is computed essentially in the same manner as fully diluted earnings per share with some exceptions. The primary exception affecting the Company's calculation of diluted earnings per share is that the dilutive effect of stock options is always based on the average market price of the stock during the period, not the higher of the average and period end market price which was required under APB 15. The following table sets forth the computation of basic and diluted earnings per share:

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Basic: | | | |
| Income before cumulative effect of change in accounting principle | $ 119,488 | $ 178,219 | $ 171,901 |
| Cumulative effect of change in accounting principle | (37,080) | - | - |
| Net income | 82,408 | 178,219 | 171,901 |
| Weighted shares outstanding | 161,574 | 159,594 | 153,362 |
| Earnings per share: | | | |
| Income before cumulative effect of change in accounting principle | $0.74 | $1.13 | $1.12 |
| Cumulative effect of change in accounting principle | (0.23) | - | - |
| Net income | $0.51 | $1.13 | $1.12 |
| Diluted: | | | |
| Income before cumulative effect of change in accounting principle | $ 119,488 | $ 178,219 | $ 171,901 |
| Interest related to convertible subordinated notes, net of tax | 5,686 | 5,700 | 4,990 |
| Income before cumulative effect of change in accounting principle including the effect of dilutive securities | 125,174 | 183,919 | 176,891 |
| Cumulative effect of change in accounting principle | (37,080) | - | - |
| Net income | $ 88,094 | $ 183,919 | $ 176,891 |
| Weighted shares outstanding | 161,574 | 159,594 | 153,362 |
| Assumed exercise of common stock equivalents | 5,317 | 6,730 | 8,459 |
| Assumed conversion of subordinated notes | 10,984 | 10,985 | 9,556 |
| Weighted average common and common equivalent shares | 177,875 | 177,309 | 171,377 |
| Earnings per share: | | | |
| Income before cumulative effect of change in accounting principle | $0.71 | $1.04 | $1.03 |
| Cumulative effect of change in accounting principle | (0.21) | - | - |
| Net income | $0.50 | $1.04 | $1.03 |

p. NEW ACCOUNTING STANDARDS

Statement of Financial Accounting Standards No. 130, "Reporting Comprehensive Income" will be adopted in the first quarter of fiscal 1999 and the Company will provide the additional disclosure as required. Statement of Financial Accounting Standards No. 131, "Disclosures about Segments of an Enterprise and Related Information" also requires adoption in fiscal 1999 and the Company is in the process of determining the effects of this disclosure on its consolidated financial statements. In February 1998, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 132, "Pension and Other Postretirement Benefit Plans", which requires adoption in fiscal 1999 and the Company will provide additional disclosure as required. In June 1998, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 133, (FAS 133), "Accounting for Derivative Instruments and Hedging Activities", which requires adoption in periods beginning after June 15, 1999 and earlier adoption is permitted. The Company has not determined the timing of the adoption of FAS 133 or the impact of such adoption on its financial statements. In March 1998, Statement of Position, (SOP), 98-1 "Accounting for the Cost of Computer Software Developed for or Obtained for Internal Use" was issued. The Company is required to adopt SOP 98-1 in fiscal 2000. The Company has not determined the timing of the adoption of SOP 98-1 or the impact of such adoption on its financial statements.

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

3. INDUSTRY AND GEOGRAPHIC SEGMENT INFORMATION

INDUSTRY

The Company operates predominantly in one industry segment: the design, manufacture and marketing of a broad line of high-performance integrated circuits that address a wide range of real-world signal processing applications.

GEOGRAPHIC INFORMATION

The Company operates in three major geographic areas. Information on the Company's geographic operations is set forth in the table below. The predominant countries comprising European operations are England, France, Germany and Ireland. The predominant country comprising Asian operations is Japan. For segment reporting purposes, sales generated by North American operations in the table include export sales of $128,253,000, $147,601,000 and $159,862,000 in 1998, 1997 and 1996, respectively. Transfers between geographic areas are negotiated based on market comparables. Operating income reflects the allocation of corporate expenses of $34,102,000, $22,049,000 and $24,093,000 in 1998, 1997 and 1996, respectively, to the appropriate geographic area based upon their beneficial and causal relationship to each area. Corporate identifiable assets consist of cash equivalents, short-term investments and intangible assets. North American identifiable assets includes the Company's equity investment in WaferTech which was $135,002,000, $86,715,000 and $42,073,000 in fiscal 1998, 1997 and 1996, respectively.

| GEOGRAPHIC SEGMENT INFORMATION | | 1998 | 1997 | 1996 |
|---|---|---|---|---|
| SALES | North America, including export | $ 748,283 | $ 711,252 | $ 658,627 |
| | Europe | 312,523 | 359,333 | 364,308 |
| | Asia | 169,765 | 172,909 | 170,851 |
| | Total sales | $ 1,230,571 | $ 1,243,494 | $ 1,193,786 |
| TRANSFERS BETWEEN AREAS | North America, including export | $ 303,048 | $ 334,783 | $ 348,574 |
| | Europe | 183,537 | 240,592 | 189,911 |
| | Asia | 59,065 | 48,131 | 39,749 |
| | Total transfers between areas | $ 545,650 | $ 623,506 | $ 578,234 |
| OPERATING INCOME | North America, including export | $ 84,491 | $ 102,959 | $ 121,974 |
| | Europe | 70,968 | 125,118 | 103,158 |
| | Asia | 2,286 | 5,125 | 2,104 |
| | Total operating income | $ 157,745 | $ 233,202 | $ 227,236 |
| IDENTIFIABLE ASSETS | North America | $ 1,071,859 | $ 891,345 | $ 734,637 |
| | Europe | 344,476 | 398,033 | 364,084 |
| | Asia | 146,177 | 142,838 | 116,527 |
| | Corporate | 299,218 | 331,637 | 293,024 |
| | Total assets | $ 1,861,730 | $ 1,763,853 | $ 1,508,272 |

## 4. ACCOUNTING CHANGE - RECOGNITION OF REVENUE ON CERTAIN SALES TO DISTRIBUTORS

In the fourth quarter of fiscal 1998, the Company changed its accounting method for recognizing revenue on all shipments to international distributors and certain shipments to domestic distributors. The change was made with an effective date of November 2, 1997 (the beginning of fiscal 1998). While the Company has historically deferred revenue on most shipments made to domestic distributors until the products were resold by the distributors to end users, it recognized revenue on shipments to international distributors and certain shipments to domestic distributors upon shipment to the distributors, net of appropriate reserves for returns and allowances. As a result of this accounting change, revenue recognition on shipments to distributors worldwide will be deferred until the products are resold to the end users. The Company believes that deferral of revenue on shipments to distributors and related gross margin until the product is shipped by the distributors is a more meaningful measurement of results of operations because it better conforms to the substance of the transaction considering the changing business environment in the international marketplace; is consistent with industry practice; and will, accordingly, better focus the entire organization on sales to end users and, therefore, is a preferable method of accounting. The cumulative effect in prior years of the change in accounting principle was a charge of approximately $37 million (net of $20 million of income taxes) or $0.21 per diluted share. The estimated pro forma effect of the accounting change on the current and prior years' results are as follows:

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| As reported: | | | |
| Net Sales | $1,230,571 | $1,243,494 | $1,193,786 |
| Net income | 82,408 | 178,219 | 171,901 |
| Basic earnings per share | $0.51 | $1.13 | $1.12 |
| Diluted earnings per share | $0.50 | $1.04 | $1.03 |
| Pro forma amounts with the change in accounting principle related to revenue recognition applied retroactively: (unaudited) | | | |
| Net sales | $1,230,571 | $1,214,602 | $1,183,186 |
| Net income | 119,488 | 167,515 | 168,328 |
| Basic earnings per share | $0.74 | $1.06 | $1.10 |
| Diluted earnings per share | $0.71 | $0.98 | $1.01 |

## 5. GAIN ON SALE OF BUSINESS

During fiscal 1998, the Company completed the sale of its disk drive IC business to Adaptec, Inc. The Company received approximately $27 million in cash for the disk drive product line and, after providing for the write-off of inventory, fixed assets and other costs incurred to complete the transaction, recorded a net gain of approximately $13 million. The Company also entered into other arrangements with Adaptec that provide for payments to the Company aggregating $13 million, of which $10 million was earned in fiscal 1998, for assisting Adaptec in research and development efforts.

## 6. RESTRUCTURING CHARGE

The Company recorded a restructuring charge of $17 million during the third quarter of fiscal 1998. Of this charge, $7 million related to a worldwide workforce reduction of approximately 350 employees, which was completed during the fourth quarter of fiscal 1998, in the manufacturing, selling and general and administrative areas. This action is expected to result in annual savings of approximately $10 million. In addition, the Company performed a review of its business strategy and concluded that the key to success in the DSP market is to focus on opportunities in the general-purpose DSP market that can provide consistent growth, while at the same time being more selective in pursuing vertical market DSP opportunities. As a result of this review the Company scaled back its efforts in some of the higher volume, lower margin, shorter life cycle product areas and wrote off $10 million, which was the carrying value of specific assets, associated with these businesses.

## 7. INVESTMENTS

Investments at October 31, 1998 and November 1, 1997 were as follows:

| | 1998 | 1997 |
|---|---|---|
| WaferTech, LLC | $ 135,002 | $ 86,715 |
| CSM | 20,784 | 20,784 |
| Other | 31,438 | 23,969 |
| | $ 187,224 | $ 131,468 |

During fiscal 1998, the Company made the final payment of $56 million in accordance with a previous joint venture agreement with Taiwan Semiconductor Manufacturing Co., Ltd., and other investors for the construction and operation of a semiconductor fabrication facility in Camas, Washington. For a total investment of $140 million, the Company acquired an 18% equity ownership in the joint venture, known as WaferTech. The first installment of $42 million was paid in fiscal 1996, and the second installment of $42 million was paid in fiscal 1997. The Company applied the equity basis of accounting to this investment in WaferTech based on the Company's ability to exercise significant influence on the operating and financial policies of the joint venture. Subsequent to the year ended October 31, 1998, the Company concluded an agreement to sell 14% of its 18% equity ownership in WaferTech for cash equal to the carrying value of the 14% equity ownership at October 31, 1998, to other WaferTech partners.

The Company has an equity investment in Chartered Semiconductor Manufacturing Pte., Ltd. in Singapore of approximately $21 million which represents a less than 5% ownership interest. The Company accounts for this investment under the cost method and therefore changes in the value of the investment are not recognized unless an impairment in the value of the investment is deemed by management to be "other than temporary."

Other investments consist primarily of long-term investments in debt and equity securities which are related to the Company's deferred compensation plan and are largely offset by a corresponding liability.

## 8. ACCRUED LIABILITIES

Accrued liabilities at October 31, 1998 and November 1, 1997 consisted of the following:

| | 1998 | 1997 |
|---|---|---|
| Accrued compensation and benefits | $ 36,582 | $ 49,089 |
| Other | 43,324 | 26,355 |
| Total accrued liabilities | $ 79,906 | $ 75,444 |

## 9. Debt and Credit Facilities

Long-term debt at October 31, 1998 and November 1, 1997 consisted of the following:

| | 1998 | 1997 |
|---|---|---|
| 3 1/2% Convertible Subordinated Notes due December 1, 2000 | $ 229,985 | $ 230,000 |
| 6 5/8% Notes due March 1, 2000 | 80,000 | 80,000 |
| Long-term debt | $ 309,985 | $ 310,000 |

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

The 3 1/2% Convertible Subordinated Notes are convertible, at the option of the holder, into the Company's common stock at any time, unless previously redeemed by the Company, at a conversion price of $20.938 per share, subject to adjustment in certain events.

Simultaneous with the sale of the 6 5/8% Notes, the Company entered into an interest rate swap and cap agreement for the term of the Notes having a notional principal amount of $40 million whereby the effective net interest rate on $40 million of the Notes will be the six-month LIBOR rate (up to a maximum of 7%) plus 1.4%. For the year ended October 31, 1998, the net effective interest rate on $40 million of the Notes was 7.2% after giving effect to the interest rate swap agreement.

The Company has a revolving credit agreement with several banks which commits them to lend up to $60 million. The Company did not borrow against this agreement at any time during fiscal 1998 or fiscal 1997. There was $0.2 million of foreign currency borrowings outstanding at October 31, 1998, which were at prevailing market rates for the respective currencies. Borrowings under the Company's credit agreement and lines of credit are generally due within six months.

10. LEASE COMMITMENTS

The Company leases certain of its facilities and equipment under various operating and capital leases which expire at various dates through 2030. The lease agreements frequently include renewal and purchase provisions and require the Company to pay taxes, insurance and maintenance costs.

Total rental expense under operating leases was $16,275,000, $13,058,000 and $11,573,000 in 1998, 1997 and 1996, respectively.

The following is a schedule of future minimum lease payments under capital leases and rental payments required under long-term operating leases at October 31, 1998:

| FISCAL YEARS | OPERATING LEASES | CAPITAL LEASES |
|---|---|---|
| 1999 | $ 13,532 | $ 15,726 |
| 2000 | 10,505 | 15,689 |
| 2001 | 7,142 | 8,806 |
| 2002 | 4,672 | 4,745 |
| 2003 | 2,372 | 3,644 |
| Later Years | 14,128 | 57 |
| Total | $ 52,351 | 48,667 |
| Less amount representing interest | | (3,628) |
| Present value of minimum lease payments | | $ 45,039 |

11. COMMITMENTS AND CONTINGENCIES

LITIGATION

The Company is a defendant in a federal lawsuit brought in Arizona by the Lemelson Medical, Education & Research Foundation, L.P. (Lemelson). On July 31, 1998, Lemelson commenced an action in federal court against the Company and 26 other companies alleging infringement of 16 patents allegedly covering various manufacturing processes and techniques used in the fabrication of semiconductor products. Lemelson served the Company with a complaint on November 24, 1998 seeking unspecified damages, treble damages for willful infringement and injunctive relief. While the Company can give no assurance that it will prevail in this litigation, it believes that resolution of this litigation will not have a material adverse effect on the Company's consolidated financial position, although an unfavorable outcome could have a material adverse effect on the Company's results of operations or cash flow in the quarter, or annual period in which this matter is resolved.

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

The Company is a defendant in a federal lawsuit brought in California by Linear Technology Corporation (LTC). On June 26, 1997, LTC filed suit against the Company, Impala Linear Corporation, Toyoda Automatic Loom Works, Ltd., Maxim Integrated Products, Inc. and Unitrode Corporation alleging patent infringement and seeking injunctive relief and unspecified damages. The parties are presently engaged in discovery. The case was originally scheduled for trial on liability issues beginning on September 7, 1999. The original district judge recused himself and the case has not yet been re-scheduled for trial. While the Company can give no assurance that it will prevail in this litigation, it believes that resolution of this litigation will not have a material adverse effect on the Company's consolidated financial position, although an unfavorable outcome could have a material adverse effect on the Company's results of operations or cash flow in the quarter, or annual period in which this matter is resolved.

Patent infringement suits are pending against the Company by Sextant Avionique, S.A. in France and the United States and Commissariat A. L'energie Atomique C.E.A. in France, claiming that the Company's accelerometer infringes certain patents. In the United States proceeding commenced by Sextant Avionique, S.A. on August 8, 1995, the federal district court entered judgment following trial in favor of the Company finding the Company did not infringe Sextant's patents. Sextant appealed the decision and the case was heard on appeal. The parties are awaiting the appellate court's determination. In the French proceeding commenced by Sextant Avionique, S.A., the French court found that the Company infringed Sextant's French patents, and therefore, unless the decision is reversed, the Company will be unable to manufacture or sell any infringing accelerometers in France. The Company does not believe that the French court's decision will have any material adverse effect on its consolidated financial position or consolidated results of operations.

The Company is a defendant-respondent in a federal lawsuit and appeal brought in California by Maxim Integrated Products, Inc. (Maxim) alleging intentional interference with contract and claiming damages of approximately $50 million against the Company. On November 11, 1992, Maxim filed suit in federal court in California alleging the Company had violated federal antitrust law and advancing pendent state law claims against the Company relating to certain distributorship agreements of the Company and seeking, among other things, injunctive relief and actual, consequential and punitive damages. On September 14, 1994, the federal district court granted summary judgment for the Company with respect to all Maxim's claims. Maxim appealed the decision and the U.S. Court of Appeals for the Ninth Circuit affirmed the district court's decision with respect to the antitrust and related state law claims and reversed the district court's summary judgment decision with respect to Maxim's remaining claims. A trial by jury was held on remand and, on April 28, 1998, the Company was found not liable on Maxim's claim of intentional interference with contractual relations. On May 18, 1998, the district court entered final judgment in favor of the Company on all of Maxim's remaining claims. Maxim subsequently filed a motion for a new trial which the court denied on November 2, 1998. Maxim has appealed the final judgment entered against it.

From time to time as a normal incidence of the nature of the Company's business, various claims, charges and litigation are asserted or commenced against the Company arising from, or related to, contractual matters, patents, trademarks, personal injury, environmental matters, product liability, and personnel and employment disputes. As to such claims and litigation, the Company can give no assurance that it will prevail. However, the Company does not believe that these matters will have a material adverse effect on the Company's consolidated financial position, although an adverse outcome of any of these matters could have a material adverse effect on the Company's consolidated results of operations or cash flow in the quarter, or annual period in which one or more these matters are resolved.

IRISH GRANTS

The Company's manufacturing facility in Limerick, Ireland has received operating and capital grants from Ireland's Industrial Development Authority. A liability to repay up to $16 million of the grants received by the Company would arise in the unlikely event the Company should discontinue its Irish operations prior to the end of the commitment periods noted in the grant agreements which expire at various dates through 2006.

WAFER SUPPLY AGREEMENTS

The Company maintains a deposit of $20 million with Chartered Semiconductor Manufacturing Pte., Ltd. This deposit is classified in the balance sheet line item "Other assets." Under the terms of this agreement, the deposit will guarantee access to certain quantities of sub-micron wafers through fiscal 2000. If the Company does not purchase the minimum quantities under the agreement, the deposit will be forfeited for the value of the wafer shortfall up to the total amount of $20 million. At the end of the agreement term, the Company's deposit will be returned, net of any forfeitures.

## 12. STOCKHOLDERS' EQUITY

### STOCK PLANS

In fiscal 1998, the stockholders approved the 1998 Stock Option Plan, which provides for the issuance of nonstatutory and incentive stock options to purchase up to 15,000,000 shares of common stock. Officers, employees, directors, consultants and advisors of the Company and its subsidiaries are eligible to be granted options under this plan at a price not less than 100% (110% in the case of incentive stock options granted to 10% or greater stockholders) of the fair market value of the common stock at the time the option is granted. The Company's 1988 Stock Option Plan was terminated upon adoption of the 1998 Stock Option Plan; however, options to purchase common stock remain outstanding under the plan. There are no remaining options outstanding under the Company's 1980 Stock Option Plan.

While the Company may grant options to employees which become exercisable at different times or within different periods, the Company has generally granted options to employees which are exercisable on a cumulative basis in annual installments of 33 1/3% each on the third, fourth and fifth anniversaries of the date of grant.

Under the 1994 Director Option Plan, which was amended in 1998, each nonemployee director is granted annually a nonstatutory option to purchase 10,500 shares of common stock at an exercise price equal to the fair market value on the date of grant. A total of 550,000 shares of common stock may be issued under this plan. These options are exercisable on a cumulative basis in annual installments of 33 1/3% each on the first, second and third anniversaries of the date of grant. The Company also has options outstanding under the 1992 Director Option Plan and the 1989 Director Stock Option Plan. Options granted under these plans are exercisable on a cumulative basis in annual installments of 33 1/3% each on the third, fourth and fifth anniversaries of the date of grant.

Information with respect to activity under the stock option plans is set forth below:

| | | OPTIONS OUTSTANDING | |
|---|---|---|---|
| STOCK OPTION ACTIVITY | SHARES AVAILABLE FOR GRANT | NUMBER | WEIGHTED AVERAGE PRICE PER SHARE |
| Balance, October 28, 1995 | 4,997 | 14,203 | $ 6.01 |
| Additional shares authorized for 1988 Stock Option Plan | 9,200 | - | - |
| Options granted | (3,881) | 3,901 | $ 16.22 |
| Options exercised | - | (2,072) | $ 2.80 |
| Options canceled | 451 | (454) | $ 10.37 |
| Balance, November 2, 1996 | 10,767 | 15,578 | $ 8.87 |
| Options granted | (4,081) | 4,081 | $ 23.33 |
| Options exercised | - | (2,432) | $ 4.21 |
| Options canceled | 312 | (322) | $ 14.13 |
| Balance, November 1, 1997 | 6,998 | 16,905 | $ 12.92 |
| Shares authorized for 1998 Stock Option Plan | 15,000 | - | - |
| Additional shares authorized for 1994 Director Stock Option Plan | 150 | - | - |
| Shares authorized for Medialight acquisition | 102 | - | - |
| Options granted | (19,946) | 19,946 | $ 16.73 |
| Options exercised | - | (2,014) | $ 6.35 |
| Options canceled | 9,128 | (9,128) | $ 23.15 |
| Shares canceled upon termination of 1988 Stock Option Plan | (2,579) | - | - |
| Balance, October 31, 1998 | 8,853 | 25,709 | $ 12.78 |

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

OPTION AMENDMENT

In September 1998 the Board of Directors approved a stock option program amendment pursuant to which all employees with stock options granted during the period beginning December 1, 1996 and ending on August 3, 1998 could elect to reduce the option exercise price to $14.75 per share (equal to the then fair market value). Upon such election, the vesting schedule for the affected options was reset, whereby one-third vests on September 8, 2001, one-third on September 8, 2002 and the final one-third on September 8, 2003. A total of 8,221,498 options with exercise prices ranging from $22.25 to $34.25 per share were amended under the program. The activity as a result of this option program amendment is presented in the preceding table as cancellations and subsequent grants.

The following table summarizes information about options outstanding at October 31, 1998:

| | OUTSTANDING OPTIONS | | | OPTIONS EXERCISABLE | |
|---|---|---|---|---|---|
| RANGE OF EXERCISE PRICE | NUMBER OUTSTANDING AT 10/31/98 | WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE (YEARS) | WEIGHTED AVERAGE EXERCISE PRICE | NUMBER EXERCISABLE AT 10/31/98 | WEIGHTED AVERAGE EXERCISE PRICE |
| $ 1.96 - $ 7.88 | 3,713 | 4.15 | $ 5.08 | 2,521 | $ 4.13 |
| $ 8.50 - $ 11.67 | 3,241 | 6.04 | $ 9.96 | 998 | $ 9.68 |
| $ 12.38 - $ 16.22 | 14,842 | 9.83 | $ 14.10 | 14 | $ 12.98 |
| $ 16.25 - $ 20.13 | 3,376 | 7.09 | $ 16.31 | 76 | $ 17.19 |
| $ 20.44 - $ 29.94 | 537 | 8.71 | $ 24.27 | 119 | $ 24.85 |
| $ 1.96 - $ 29.94 | 25,709 | 8.15 | $ 12.78 | 3,728 | $ 6.58 |

The Company has an employee stock purchase plan (ESPP) that allows eligible employees to purchase, through payroll deductions, shares of the Company's common stock at 85% of the fair market value at specified dates. Employees purchased 602,500 shares in 1998 (579,200 and 664,200 in 1997 and 1996, respectively) for $11.8 million ($10.2 million and $9.0 million in 1997 and 1996, respectively). At October 31, 1998, 857,400 common shares remained available for issuance under the stock purchase plan.

Under the 1991 Restricted Stock Plan, a maximum of 2,700,000 shares of common stock was authorized for awards by the Company to key employees for nominal consideration. This plan succeeded the Company's 1978 Restricted Stock Plan which provided for the issuance of up to 7,372,800 shares of common stock. Shares awarded from both plans are restricted as to transfer, usually for a period of five years and, under certain conditions, may be subject to repurchase by the Company at the original purchase price per share. Shares awarded under the Company's restricted stock plans, net of cancellations, for 1998, 1997 and 1996 were 217,500, 168,000 and 212,000, respectively. The fair market value of the shares at the date of award was $6,293,000, $4,002,000 and $3,770,000 in fiscal 1998, 1997 and 1996, respectively and was accounted for as deferred compensation and is being amortized over the restricted period. During 1998, 1997 and 1996, $2,918,000, $2,309,000 and $1,949,000, respectively, of such compensation was charged to expense. At October 31, 1998, there were 597,500 shares of common stock available for issuance under the 1991 Restricted Stock Plan.

As of October 31, 1998, a total of 46,979,672 common shares were reserved for issuance under the Company's stock plans.

COMMON STOCK REPURCHASE

In May and October of 1998, the Board of Directors authorized the Company to repurchase up to 4 million and 8 million shares, respectively, of its common stock over the succeeding 12 months. At October 31, 1998 the Company had purchased 4,400,000 shares of its common stock an average purchase price of $19.13 per share. The Company expects to purchase the remaining 7,600,000 as market conditions allow. The repurchased shares will be held as treasury shares and will be available for issuance under the Company's stock option plans, employee stock purchase plan and other benefit plans.

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

STOCK-BASED COMPENSATION

As permitted under Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation," the Company has elected to follow Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees," and related Interpretations, in accounting for stock-based awards to employees. Under APB 25, the Company generally recognized no compensation expense with respect to such awards.

Pro forma information regarding net income and earnings per share is required by FAS 123 for awards granted after October 28, 1995 as if the Company had accounted for its stock-based awards to employees under the fair value method of FAS 123. The fair value of the Company's stock-based awards to employees was estimated using a Black-Scholes option pricing model. The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options which have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions, including the expected stock price volatility. Because the Company's stock-based awards to employees have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing models do not necessarily provide a reliable single measure of the fair value of its stock-based awards to employees. The fair value of the Company's stock-based awards to employees was estimated assuming no expected dividends and the following weighted average assumptions:

| | OPTIONS | | | ESPP | | |
|---|---|---|---|---|---|---|
| | 1998 | 1997 | 1996 | 1998 | 1997 | 1996 |
| Expected life (years) | 6.1 | 6.2 | 6.2 | 1.0 | 1.0 | 1.0 |
| Expected stock price volatility | 49.5% | 47.7% | 43.5% | 57.6% | 56.0% | 55.8% |
| Risk-free interest rate | 5.3% | 6.2% | 5.7% | 5.4% | 5.8% | 5.8% |

The following is a summary of weighted average grant date values generated by application of the Black-Scholes model:

| | WEIGHTED AVERAGE GRANT DATE VALUE | | |
|---|---|---|---|
| | 1998 | 1997 | 1996 |
| Stock option plans | $ 9.82 | $ 12.68 | $ 8.36 |
| ESPP | $ 8.33 | $ 9.53 | $ 7.37 |

As required under FAS 123, the reported net income and diluted earnings per share have been presented to reflect the impact had the Company been required to include the amortization of the Black-Scholes option value as expense. For purposes of this disclosure, the estimated fair value of the options is amortized to expense over the options' vesting periods. The Company's pro forma information follows:

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Pro forma net income | $ 56,719 | $170,173 | $170,717 |
| Pro forma diluted earnings per share | $0.32 | $0.97 | $1.00 |

The effects on pro forma disclosures of applying FAS 123 are not likely to be representative of the effects on pro forma disclosures of future years. Because FAS 123 is applicable only to options granted subsequent to October 28, 1995, the pro forma effect will not be fully reflected until 2000.

PREFERRED STOCK

The Company has 500,000 authorized shares of $1.00 par value Preferred Stock. The Board of Directors is authorized to fix designations, relative rights, preferences and limitations on the preferred stock at the time of issuance.

COMMON STOCK PURCHASE RIGHTS

In March 1998, the Board of Directors adopted a Stockholder Rights Plan (the Stockholder Rights Plan) which replaced a plan adopted by the Board in 1988. Pursuant to the Stockholder Rights Plan, each share of the Company's Common Stock (Common Stock) has an associated right (the Rights). Under certain circumstances, each Right would entitle the registered holder to purchase from the Company one one-thousandth of a share of Series A Junior Participating Preferred Stock at a Purchase Price of $180 in cash, subject to adjustment.

The Rights are not exercisable and cannot be transferred separately from the Common Stock until ten business days (or such later date as may be determined by the Board of Directors) after (i) the public announcement that a person or group of affiliated or associated persons has acquired (or obtained the right to acquire) beneficial ownership of 15% or more of the Common Stock or (ii) the commencement of a tender offer or exchange offer that would result in a person or group beneficially owning 20% or more of the outstanding Common Stock. If and when the Rights become exercisable, each holder of a Right shall have the right to receive, upon exercise, that number of shares of Common Stock (or in certain circumstances, cash property or other securities of the Company) which equals the price of the Right divided by 50% of the current market price (as defined in the Stockholder Rights Plan) per share of Common Stock at the date of the occurrence of such event. In the event that at any time after any person becomes an acquiring person, (i) the Company is consolidated with, or merged with and into, another entity and the Company is not the surviving entity of such consolidation or merger or if the Company is the surviving entity, but shares of its outstanding common stock are changed or exchanged for stock or securities or cash or any other property, or (ii) 50% or more to the Company's assets or earning power is sold or transferred, each holder of a Right shall thereafter have the right to receive upon exercise, that number of shares of common stock of the acquiring company which equals the exercise price of the Right divided by 50% of the current market price of such common stock at the date of the occurrence of the event.

The Rights have certain anti-takeover effects, in that they would cause substantial dilution to a person or group that attempts to acquire a significant interest in the Company on terms not approved by the Board of Directors. The Rights expire on March 17, 2008 but may be redeemed by the Company for $.001 per right at any time prior to the tenth day following a person's acquisition of 15% or more of the Company's common stock. So long as the Rights are not separately transferable, each new share of Common Stock issued will have a Right associated with it.

13. RETIREMENT PLANS

The Company and its subsidiaries have various savings and retirement plans covering substantially all employees. The Company maintains a defined contribution plan for the benefit of its eligible United States employees. This plan provides for Company contributions of up to 5% of each participant's total eligible compensation. In addition, the Company contributes an amount equal to each participant's contribution, if any, up to a maximum of 2% of each participant's total eligible compensation. During fiscal 1996, the Company's contributions increased to match an additional 50% of employee contributions between 2% and 4% of total eligible compensation. The Company also has various defined benefit pension and other retirement plans for certain foreign employees that are consistent with local statutes and practices. The total expense related to all of the Company's retirement plans in 1998, 1997 and 1996 was $21 million, $19 million and $17 million, respectively, which primarily consists of costs related to the domestic defined contribution plan. Also included in total expense is pension expense related to foreign defined benefit plans of approximately $3 million for 1998, 1997 and 1996. Summary data related to these foreign plans at October 31, 1998 was as follows: accumulated benefit obligation, substantially vested, of $27 million; projected benefit obligation of $56 million; plan assets at fair value of $59 million; discount rates ranging from 4% to 12%; compensation increase rates ranging from 3% to 11% and expected rate of return on assets ranging up to 12%. Summary data related to these foreign plans at November 1, 1997 was as follows: accumulated benefit obligation, substantially vested, of $26 million; projected benefit obligation of $51 million; plan assets at fair value of $51 million; discount rates ranging from 4% to 12%; compensation increase rates ranging from 3% to 10% and expected rate of return on assets ranging up to 13%.

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

## 14. INCOME TAXES

The reconciliation of income tax computed at the U.S. federal statutory rates to income tax expense is as follows:

| | LIABILITY METHOD | | |
|---|---|---|---|
| | 1998 | 1997 | 1996 |
| U.S. federal statutory tax rate | 35.0% | 35.0% | 35.0% |
| Income tax provision reconciliation: | | | |
| Tax at statutory rate | $ 52,660 | $ 82,578 | $ 80,759 |
| Irish income subject to lower tax rate | (10,960) | (19,880) | (17,813) |
| Change in valuation allowance | (5,559) | (1,835) | (2,641) |
| State income taxes, net of federal benefit | 502 | 964 | 1,338 |
| Research and development tax credits | (4,400) | (5,000) | (1,300) |
| Foreign Sales Corporation | (1,745) | (3,161) | (3,575) |
| Amortization of goodwill | 545 | 528 | 506 |
| Net foreign tax in excess of U.S. federal statutory tax rate | 125 | 2,765 | 957 |
| Other, net | (197) | 701 | 608 |
| Total income tax provision | $ 30,971 | $ 57,660 | $ 58,839 |

For financial reporting purposes, income before income taxes includes the following components:

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Pretax income: | | | |
| Domestic | $ 34,290 | $ 84,599 | $ 101,760 |
| Foreign | 116,169 | 151,280 | 128,980 |
| | 150,459 | $ 235,879 | $ 230,740 |

The components of the provision for income taxes are as follows:

| | 1998 | 1997 | 1996 |
|---|---|---|---|
| Current: | | | |
| Federal | $ 24,588 | $ 35,500 | $ 34,278 |
| Foreign | 17,983 | 26,811 | 15,737 |
| State | 772 | 1,483 | 2,100 |
| Total current | $ 43,343 | $ 63,794 | $ 52,115 |
| Deferred (prepaid): | | | |
| Federal | $ (7,792) | $ (3,364) | $ 1,318 |
| Foreign | (4,580) | (2,770) | 5,406 |
| Total deferred (prepaid) | $ (12,372) | $ (6,134) | $ 6,724 |

The Company's practice is to reinvest indefinitely the earnings of certain international subsidiaries. Accordingly, no U.S. income taxes have been provided for approximately $509,022,000 of unremitted earnings of international subsidiaries.

The Company had recorded a valuation allowance to reflect the estimated amount of deferred tax assets that may not be realized due to the expiration of book and tax capital losses. The balance for the valuation allowance for deferred assets was $0 at October 31, 1998, $5.6 million at November 1, 1997 and $7.4 million at November 2, 1996.

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS -- (CONTINUED)

The significant components of the Company's deferred tax assets and liabilities for the fiscal years ended October 31, 1998 and November 1, 1997 are as follows:

| | 1998 | 1997 |
|---|---|---|
| Deferred tax assets: | | |
| Inventory reserves | $ 36,176 | $ 21,734 |
| Capital loss carryover | -- | 5,559 |
| Deferred income on shipments to distributors | 39,210 | 13,601 |
| Reserves for compensation and benefits | 11,968 | 6,965 |
| Restricted stock | 2,466 | 2,689 |
| Intercompany profits in foreign inventories | 5,066 | 4,973 |
| Reserve for bad debts | 5,694 | 6,508 |
| Foreign tax credits | (492) | 1,795 |
| Other | 4,340 | 2,289 |
| Total gross deferred tax assets | 104,428 | 66,113 |
| Valuation allowance for deferred tax assets | -- | (5,559) |
| Total deferred tax assets | $104,428 | $ 60,554 |
| Deferred tax liabilities: | | |
| Depreciation | $(38,069) | $(26,533) |
| Total gross deferred liabilities | $(38,069) | $(26,533) |
| Net deferred tax assets | $ 66,359 | $ 34,021 |

The change in deferred taxes of $32 million from fiscal 1997 to fiscal 1998, includes $20 million of deferred taxes as a result of the cumulative effect of the change in accounting principle.

## REPORT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

The Board of Directors and Stockholders
Analog Devices, Inc.

We have audited the accompanying consolidated balance sheets of Analog Devices, Inc. as of October 31, 1998 and November 1, 1997, and the related consolidated statements of income, stockholders' equity and cash flows for each of the three years in the period ended October 31, 1998. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Analog Devices, Inc. at October 31, 1998 and November 1, 1997, and the consolidated results of its operations and its cash flows for each of the three years in the period ended October 31, 1998, in conformity with generally accepted accounting principles.

As discussed in Notes 2(l) and 4 to the consolidated financial statements, in the fiscal year ended October 31, 1998, the Company changed its method for recognizing revenue on certain shipments to distributors.

/s/ ERNST & YOUNG LLP

Boston, Massachusetts
December 1, 1998

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ANALOG DEVICES, INC.
SUPPLEMENTARY FINANCIAL INFORMATION (Unaudited)

| 1998 | FIRST QUARTER | SECOND QUARTER(A) | THIRD QUARTER(B) | FOURTH QUARTER |
|---|---|---|---|---|
| Sales | | | | |
| As previously reported | $330,721 | $333,109 | $294,920 | $297,650 |
| Effect of distributor accounting change | (12,930) | (13,679) | 780 | -- |
| As restated | 317,791 | 319,430 | 295,700 | 297,650 |
| Gross margin | | | | |
| As previously reported | 169,651 | 165,598 | 133,398 | 132,705 |
| Effect of distributor accounting change | (6,192) | (7,161) | 487 | -- |
| As restated | 163,459 | 158,437 | 133,885 | 132,705 |
| Cumulative effect of change in accounting principle | (37,080) | -- | -- | -- |
| Net income | | | | |
| As previously reported | 44,284 | 48,440 | 8,791 | 26,336 |
| Effect of distributor accounting change | (41,105) | (4,655) | 317 | -- |
| As restated | 3,179 | 43,785 | 9,108 | 26,336 |
| BASIC EARNINGS PER SHARE: | | | | |
| Earnings before cumulative effect of accounting change | | | | |
| As previously reported | 0.28 | 0.30 | 0.05 | 0.16 |
| Effect of distributor accounting change | (0.02) | (0.03) | -- | -- |
| As restated | 0.26 | 0.27 | 0.05 | 0.16 |
| Cumulative effect of change in accounting principle | (0.23) | -- | -- | -- |
| Earnings after effect of distributor accounting change | 0.03 | 0.27 | 0.05 | 0.16 |
| DILUTED EARNINGS PER SHARE: | | | | |
| Earnings before cumulative effect of accounting change | | | | |
| As previously reported | 0.26 | 0.28 | 0.06 | 0.16 |
| Effect of distributor accounting change | (0.02) | (0.03) | -- | -- |
| As restated | 0.24 | 0.25 | 0.06 | 0.16 |
| Cumulative effect of change in accounting principle | (0.21) | -- | -- | -- |
| Earnings after effect of distributor accounting change | 0.03 | 0.25 | 0.06 | 0.16 |
| 1997 | | | | |
| Sales | $292,063 | $300,813 | $318,139 | $332,479 |
| Gross margin | 143,773 | 150,632 | 159,238 | 167,320 |
| Net income | 39,180 | 42,117 | 45,969 | 0,953 |
| Basic earning per share | 0.25 | 0.27 | 0.29 | 0.32 |
| Diluted earnings per share | 0.23 | 0.25 | 0.27 | 0.29 |
| Pro forma amounts for 1997 assuming the change in accounting principle related to revenue recognition was applied retroactively: | | | | |
| Net income | $ 33,218 | $ 40,488 | $ 42,435 | $ 51,374 |
| Basic earning per share | 0.21 | 0.26 | 0.27 | 0.32 |
| Diluted earnings per share | 0.20 | 0.24 | 0.25 | 0.29 |

(a) Includes $13.1 million gain on sale of a business, see Note 5 of the Notes to the Company's Consolidated Financial Statements.

(b) Includes a $17 million restructuring charge, see Note 6 of the Notes to the Company's Consolidated Financial Statements

Exhibit 18

December 1, 1998

Joseph E. McDonough
Vice President, Finance and
Chief Financial Officer
Analog Devices, Inc.
Three Technology Way
Norwood, MA 02062

Dear Mr. McDonough:

Notes 2 (l) and 4 of the Notes to Consolidated Financial Statements of Analog Devices, Inc. included in its Form 10-K for the year ended October 31, 1998 describe a change in the method of recognizing revenue on shipments to international distributors and certain shipments to domestic distributors. Previously, the Company recognized revenue from these transactions upon shipment of product to the distributor, but provided specific reserves for possible returns and allowances. Following the accounting change, revenue on shipments of products is deferred for these transactions until the products are resold to end users. You have advised us that you believe that the change is to a preferable method in your circumstances because it provides better correspondence with the substance of the event being recognized considering the changing business environment in the international marketplace, is consistent with industry practice and provides greater consistency among all transactions of the Company.

There are no authoritative criteria for determining a 'preferable' method of revenue recognition for these transactions based on the particular circumstances; however, we conclude that the change in the method of accounting for recognizing revenue on shipments to international distributors and certain shipments to domestic distributors is to an acceptable alternative method which, based on your business judgment to make this change for the reasons cited above, is preferable in your circumstances.

Very truly yours,

/s/ Ernst & Young LLP

Exhibit 21

# SUBSIDIARIES

The following is a list of the Company's subsidiaries:

| | ORGANIZED UNDER LAW OF | PERCENTAGE OF VOTING SECURITIES OWNED BY REGISTRANT AS OF OCTOBER 31, 1998 |
|---|---|---|
| Analog Devices Limited | United Kingdom | 100% |
| Analog Devices, GmbH | Germany | 100% |
| Analog Devices, S.A. | France | 100% |
| Analog Devices, K.K. | Japan | 100% |
| Analog Devices APS | Denmark | 100% |
| Analog Devices Nederland, B.V. | The Netherlands | 100% |
| Analog Devices International, Inc. | Massachusetts | 100% |
| Analog Devices Israel, Ltd. | Israel | 100% |
| Analog Devices A.B. | Sweden | 100% |
| Analog Devices SRL | Italy | 100% |
| Analog Devices, HDLSGESMBH M.B.H. | Austria | 100% |
| Analog Devices Korea, Ltd. | Korea | 100% |
| Analog Devices, B.V. | The Netherlands | 100% |
| Analog Devices Finance N.V. | Netherlands Antilles | 100% |
| Analog Devices Holdings, B.V. | The Netherlands | 100% |
| Analog Devices Research & Development Ltd. | Ireland | 100% |
| Analog Devices (Philippines), Inc. | The Philippines | 100% |
| Analog Devices Foreign Sales Corporation, B.V. | The Netherlands | 100% |
| Analog Devices Foundry Services, Inc. | Delaware | 100% |
| Analog Devices Asian Sales, Inc. | Delaware | 100% |
| Analog Devices Taiwan, Ltd. | Taiwan | 100% |
| Analog Devices Ireland, Ltd. | Ireland | 100% |
| Analog Devices Hong Kong, Ltd. | Hong Kong | 100% |
| Analog Devices Pty, Ltd. | Australia | 100% |
| Analog Devices India Private Limited | India | 100% |
| Analog Devices Gen. Trias, Inc. | Philippines | 100% |
| Analog Devices International Financial Services Company | Ireland | 100% |
| Analog Devices Foreign Sales Corporation | Barbados | 100% |
| Mosaic Microsystems Limited | United Kingdom | 100% |
| Analog Development (Israel) 1996 Ltd. | Israel | 100% |
| Analog Devices (China) Co. Ltd. | China | 100% |
| Analog Devices Canada, Ltd. | Canada | 100% |
| Analog/NCT Supply Ltd. | Delaware | 50% |
| Analog Devices Realty Holdings, Inc. | Philippines | 40% |
| WaferTech, LLC | Delaware | 18% |
| Analog Supplies Company | Japan | 15% |
| Analyzed Investments, Ltd. | Ireland | 7.4% |

Exhibit 23
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CONSENT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

We consent to the incorporation by reference in this Annual Report (Form 10-K) of Analog Devices, Inc. of our report dated December 1, 1998, included in the 1998 Annual Report to Shareholders of Analog Devices, Inc.

Our audit also included the financial statement schedule of Analog Devices, Inc. listed in Item 14(a). This schedule is the responsibility of the Company's management. Our responsibility is to express an opinion on this schedule based on our audits. In our opinion, the financial statement schedule referred to above, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We consent to the incorporation by reference in the Registration Statements and related prospectuses (Form S-8 Nos. 2-63561, 2-90023, 2-95495, 33-2502, 33-4067, 33-22604, 33-22605, 33-29484, 33-39851, 33-39852, 33-43128, 33-46520, 33-46521, 33-60696, 33-60642, 33-61427, 33-64849, 333-04771, 333-04819, 333-04821, 333-08493, 333-47789, 333-47787, 333-48243, 333-56529 and 333-69359 and Form S-3 Nos. 333-08505, 333-08509 and 333-17651) of Analog Devices, Inc. of our report dated December 1, 1998, with respect to the consolidated financial statements incorporated herein by reference, and our report included in the preceding paragraph with respect to the financial statement schedule included in this Annual Report (Form 10-K) of Analog Devices, Inc.

/s/ ERNST & YOUNG LLP

Boston, Massachusetts
January 22, 1999

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1,000
U.S. DOLLARS

YEAR
OCT-31-1998
NOV-02-1997
OCT-31-1998
1
263,331
41,575
239,693
32,332
275,076
903,529
1,367,469
664,038
1,861,730
320,859
309,985
0
0
27,349
1,101,040
1,861,730
1,230,571
1,230,571
642,085
642,085
430,741
0
11,229
150,459
30,971
119,488
0
0
(37,080)
82,408
0.51
0.50